run 5

THE JOURNAL OF STRATEGIC STUDIES GROUP

Issue 3

AUST $4.00/US $4.00

Featured in this Issue

- ★ **Guadalcanal** – a scenario for *Battlefront*
- ★ **Zitadelle —** a scenario for *Europe Ablaze*
- ★ *Battle of Antietam* reviewed
- ★ Part 3 of our directory of World War II warships in *Carriers at War* format.

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EUROPE ABLAZE is a complete game system designed to bring to life the vital struggle in the air which raged over Europe for almost five years.

Three major scenarios, selected from the various phases of the war, are presented to simulate the changing fortunes of battle as Britain, at first beleaguered by an overwhelming Luftwaffe, finally becomes the bastion from which American and British bombing forces wreak havoc upon the German war machine.

Each scenario offers up to six command positions per side, any or all of which may be computer controlled. The player takes the roll of C in C (Air Forces) and/or up to five subordinate commands. The result is an entertaining and rewarding experience for either solitaire or group play.

Major bombing missions are planned twice per day (daylight ops at midnight, night ops at noon) and require target selection, course plotting, speed and H hour determination and finally squadron allocation. Other operations available to strike aircraft include harassment, raid, and recon missions.

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Targets range from city centres (population, industry, communications and port facilities) to radar stations, airfields and shipping lanes.

And furthermore... we have provided the creative gamer and historian with a complete *game design kit*.

This exceptional tool will allow you to create your own scenario variants as well as designing original campaigns. To explain their use, the design routines are illustrated with an entirely new scenario recreating the operations of the US 15th Air Force from Italy in May 1944.

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Available for the Apple II Family (64K) and C-64
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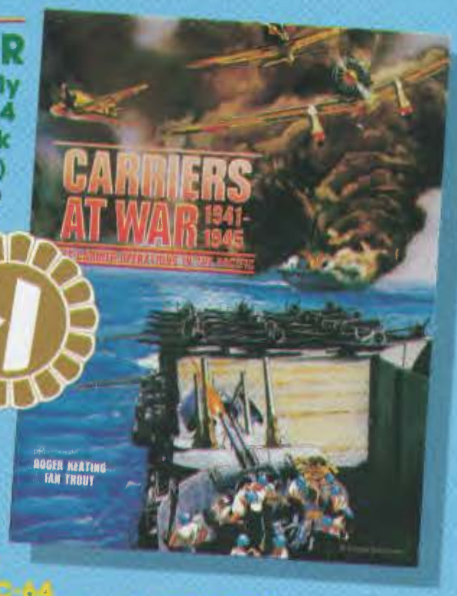

"Besides its historical accuracy, *Carriers at War* is the best-playing simulation of naval warfare I have seen on either tabletop or video monitor."
II Computing.

"*Carriers at War* is the best game available on World War II carrier operations. It is, perhaps, the best wargame of 1984 on any topic."
Computer Gaming World.

"In actual play, the computer is no more predictable than a human counterpart. It is capable of undertaking daring and risky manoeuvres, or it might play conservatively. You can never be sure."
Your Computer.

"...It's an excellent game – playable, enjoyable and tense. Kudos to SSG, and I hope they continue producing products of this high level for others to try to emulate."
Strategy & Tactics Magazine.

"The combination of excellent detail and an innovative, easy-to-learn game system makes *Carriers at War* one of the most attractive products currently available on the market."
Commodore's POWER/PLAY.

"All in all, *Carriers at War* is one of the best computer wargames around, and is definitely the finest programming accomplishment in quite some time. You gotta get it!"
Fire and Movement.

Winner of U.S.A.'s Charles Roberts Award for Best Computer Game 1984-1985, the first Australian Game to win this award.

REACH FOR THE STARS

Available for the Apple II Family & C-64
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"*Reach for the Stars*... is just about the best science fiction game for the thinking person available on any microcomputer."
Science Digest.

"This is an interstellar strategy game . . . but that's like calling the Apple a 'nice computer.' It leaves a good deal out. Think of it this way: If *Wizardry* is a fantasy game and *Zaxxon* is an arcade game, then *Reach for the Stars* is a strategy game . . . In short, the game itself is beautifully designed. More than that, the 'engineering' of the thing is lovely. You can do just about anything you want to with the system, from adding various hazards to the game universe, to stopping a game in the middle and saving it on disc."
Softline.

"*Reach for the Stars* is a stimulating program."
Creative Computing.

"*RFTS* is, after a little playing, a very user friendly game . . . (it) offers features to be found in no other space game. Its great artificial intelligence and careful design could only be expected after Roger Keating's many successful designs for SSI and Ian Trout's long hours of work in development. My only hope is that *RFTS* is soon followed by more games of the same quality."
Computer Gaming World.

"... once mastered this might be the only game you'll ever want to buy for your C-64. Indeed, it would be worth buying a computer to play it. Definitely one of my most favourite games and a classic."
Commodore Magazine.

"In summarizing, *RFTS* is an excellent game. It is fast and intelligent, and the game mechanics are simple but the strategy required is quite devious. Add to this the natural strengths of a game employing four people in subtle but all out competition and you have a winner."
Your Computer.

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Run 5

Issue 3
July, 1986

Editor's Chance 2
New Releases, Design Contest,
Work in Progress. . .

Guadalcanal 3
The Japanese assault on Bloody Ridge
for Battlefront.

Zitadelle 11
The air component of the Kursk
Offensive for Europe Ablaze.

Battle of Antietam 18
David Landrey and Chuck Krogel's
Civil War game reviewed.

Warships of the World (Part Three) 21
The French, German, Italian, Dutch
and other navies. (1939-1945)

Question and Answer Forum 32
Well... most of the questions
get answered

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Run 5 is available wherever you buy our games or you can order it direct from SSG. The subscription rates are shown elsewhere on this page.

EDITOR'S CHANCE

I suspect the painting on the front cover of this issue has given away the fact that we have released a new game.

Well... we have!

***Battlefront** is now available everywhere (we hope). If you're having trouble finding a copy, give **Electronic Arts** a ring on (415) 571-7171 if you live in North America, otherwise contact our Australian Office.*

Given that there is probably a certain amount of personal bias in my evaluation, I'm happy to inform you all that ***Battlefront*** is a terrific game.

What's more, there is an almost limitless source of material for additional scenarios. Enough to keep this magazine humming forever!

In coming issues we plan to explore a wide variety of battlefields; from the muddy trenches of World War I to the bitter-cold plateaus of North Korea.

There will be two ***Battlefront*** scenanarios in the next issue. The topics will be chosen from the Gallipoli fiasco of 1915, the Russo-Finnish War of 1939, the British counter-attack at Arras in 1940, the struggle for the Kokoda Trail over the Owen Stanley Mountains of New Guinea in 1942, the opening phases of the Smolensk envelopment in 1941 and the Italian invasion of Greece from Albania in 1941.

The winning ***Carriers at War*** scenario from our Design Contest will be published if we get the judging completetd in time, otherwise we'll publish a ***Europe Ablaze*** scenario covering an episode from the air war in China in 1944 using a reduced ground scale.

Other articles will include a detailed breakdown of World War II armies for use in creating ***Battlefront*** scenarios and a listing of World War II aircraft types for use in ***Europe Ablaze***. We'll publish some of your letters (only the complimentary ones, of course!) and, wherever possible, disparage our competitor's products. Speaking of disparaging... there will be a review of something. Just what we'll pick on we haven't decided yet.

THE DESIGN CONTEST

We have received 46 entries for the ***Carriers at War*** contest but only 3 for ***Europe Ablaze***. We are going to extend the time for the ***Europe Ablaze*** contest for another three months; i.e. you have until September 30th to lodge an entry.

You can get the details from either the first or second issue of ***Run 5***.

Continued on Page 32

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To subscribe, consult the schedule of fees above and make sure you include your computer type (Apple or C-64) with your cheque or money order if you want a disk subscription. A disk subscription entitles you to however many disks are necessary to complement all the scenarios in the magazine.

For those of you who don't want to spend this extra money. . . don't worry. All the data necessary to build the magazine scenarios will be provided for you.

US subscribers should send a cheque or money order to our US office. Everyone else should send their cheque, money-order, Visa or Mastercard to our Australian office.

Individual scenario disks can be purchased for $15.00 each.

GUADALCANAL

The Battle for Bloody Ridge
12th - 21st September, 1942

A SCENARIO FOR
BATTLEFRONT

By Ian Trout

The Island of Guadalcanal lies at the southeastern end of the Solomon's chain; a group of tropical islands which extend a further 900 hundred miles to the northwest. The airfield facilities there, captured by the marines in ***Operation Watchtower****, were the only ones of note in the Solomons. Some seaplane facilities and the never properly completed fighter strip at Buin on the southern tip of Bougainville were the only Japanese bases between Guadalcanal and Rabaul over 1,000 miles away.*

The first serious attempt to recapture the airfield, named Henderson in honour of a gallant marine flyer, was to take place on September 13th. At such a distance, and in the teeth of enemy air superiority, the attack was foredoomed. Inadequate planning and rigid doctrine magnified the scale of the disaster.

American troops, employing simple and sensible defensive techniques, were able to destroy their opponents with surprising ease.

From this point in the war, the Japanese Army's hitherto almost unbroken string of successes became a similarly unbroken string of defeats.

The Japanese military philosophy, more suited to the medieval world, was manifestly inadequate to wage war in the modern era against a resolute opponent.

Could the Japanese forces have done any better. . .

THE SITUATION

On the morning of August 7th, 1942, two reinforced regiments of the 1st Division of the United States Marine Corps invaded the islands of Guadalcanal, Tulagi and Florida at the southern end of the Solomon's Group.

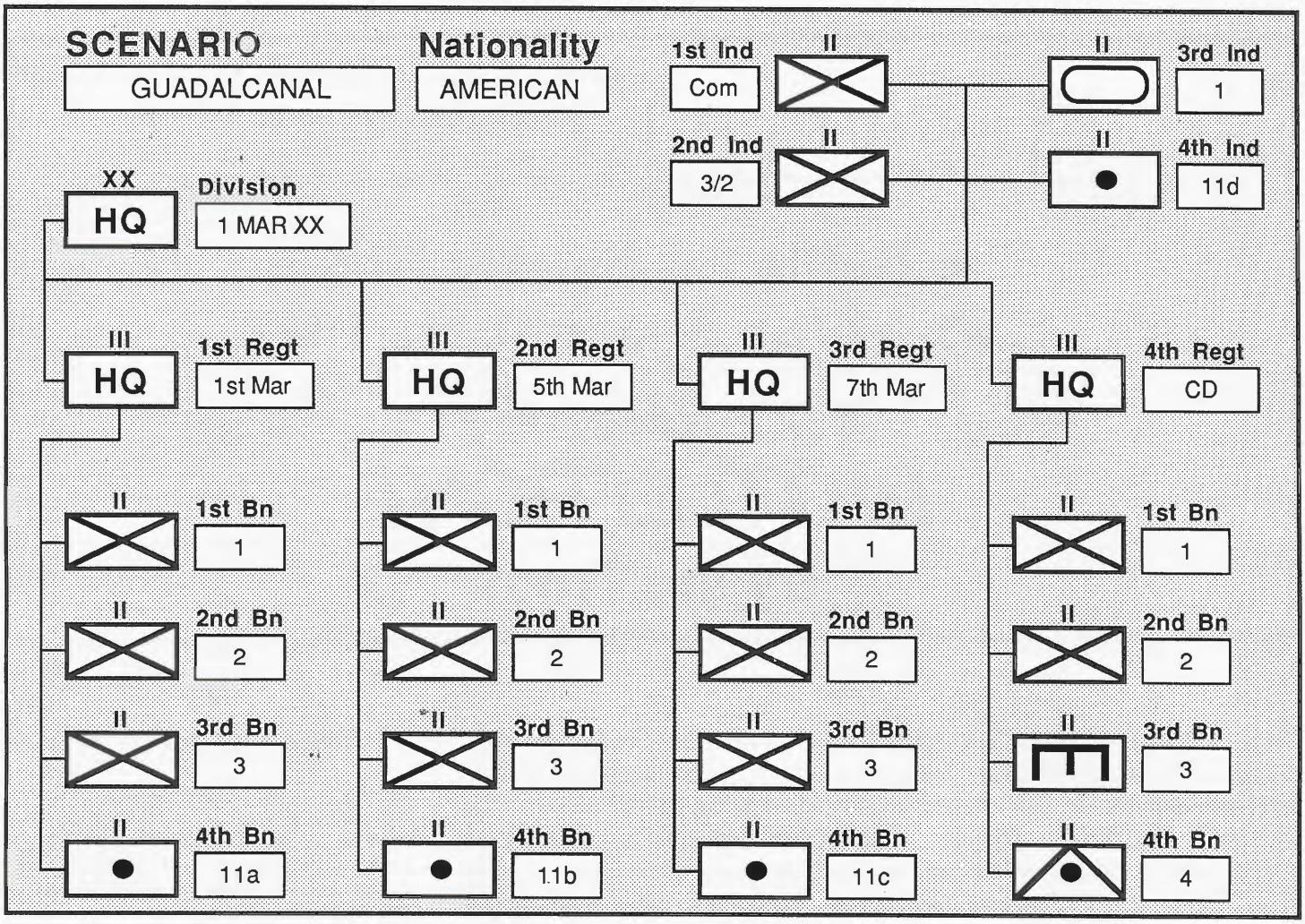
Only the seaplane facilities on the island of Tulagi were seriously contested. The 400 or so Japanese marines defending them fought fiercely and bravely; within a day they were dead.

On Guadalcanal, there was no resistance at all. Brigadier-General Alexander A. Vandegrift, in command of the expedition, got his troops ashore and more or less deployed by the end of the first day. By late that afternoon the lack of amphibious operation experience had turned the marines' landing beaches into a first class fiasco. What supplies had been landed were hopelessly muddled.

To cap the confusion, Admiral Turner, in response to the pasting received by USN surface ships in the Battle of Savo Island, then sailed away with many of the transports only partially unloaded.

Happily, the Japanese on Guadalcanal were not combat troops, but rather a miscellaneous collection of construction and garrison personel from the 8th Base Force. The airstrip they were building was all but completed on the day of the invasion; just in time to be put to good use by advance echelons from MAG 23 which began arriving from August 20th.

The first attempt to recapture Henderson Field was made by a single battalion of



HEADQUARTERS DATA

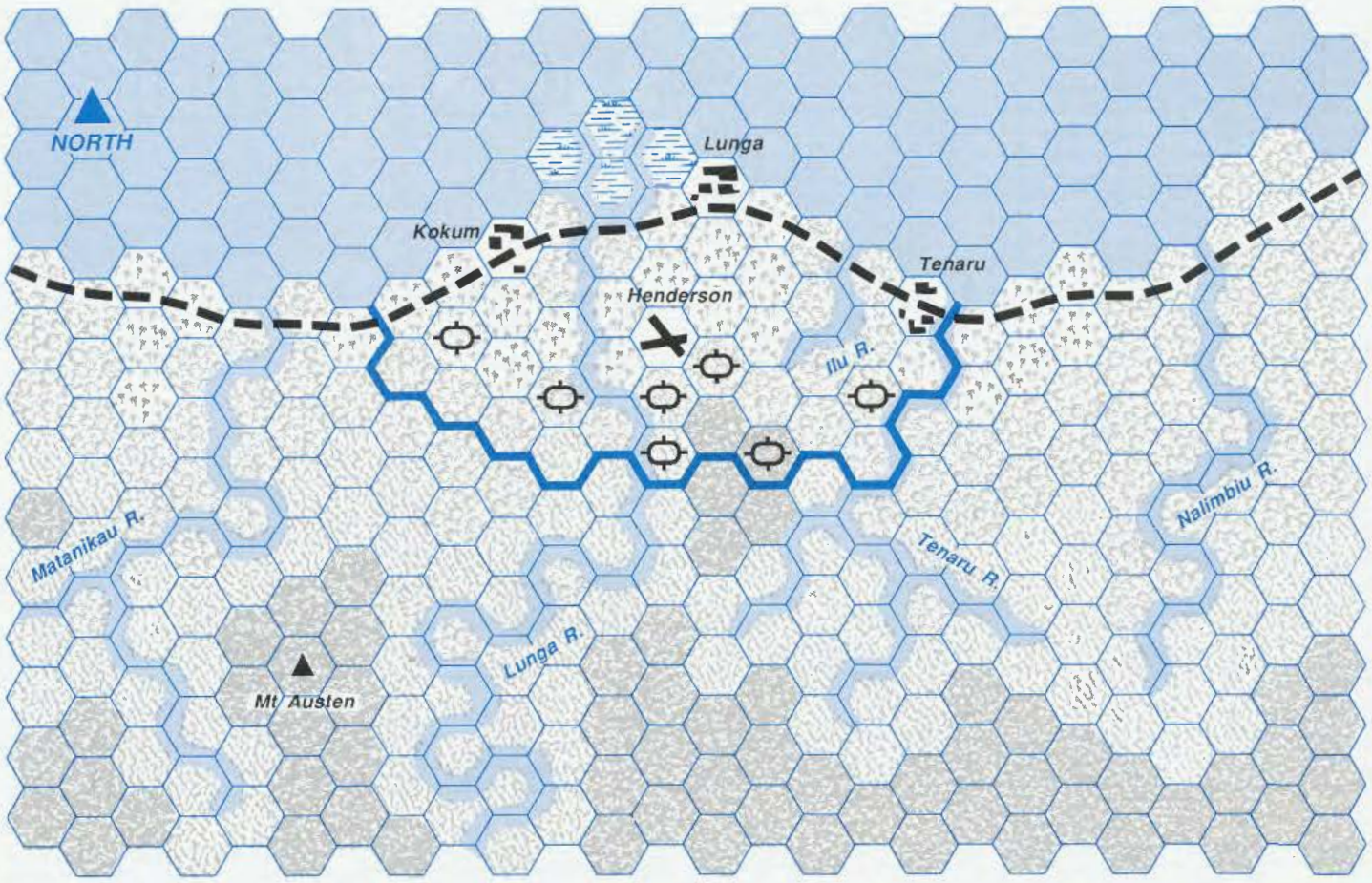
FORMATION		XX HQ	1/RHQ	2/RHQ	3/RHQ	4/RHQ
HQ I.D.	[8]	1 MAR XX	1st Mar	5th Mar	7th Mar	CD
UNIT TYPE	[8]	MARINE	MARINE	MARINE	MARINE	DEFENSE
HQ ADMIN	0-7	5	5	5	5	4
LEADERSHIP	0-7	5	5	5	4	4
HQ SUPPLY	0-7	5	6	6	6	6
ARRIVAL	0-63	0	N/A	N/A	N/A	N/A
LOCATION	(x,y)	13,3	N/A	N/A	N/A	N/A

BATTALION DATA

FORMATION	II/III	1/1	2/1	3/1	4/1	1/2	2/2	3/2	4/2	1/3	2/3	3/3	4/3	1/4	2/4	3/4	4/4	1/-	2/-	3/-	4/-
UNIT I.D.	[3]	1	2	3	11a	1	2	3	11b	1	2	3	11c	1	2	3	4	Com	3/2	1	11d
LOCATION	(x,y)	14,7	12,7	16,6	14,4	8,5	8,4	11,5	10,4	13,1	13,1	14,2	14,2	17,4	10,3	13,2	15,3	10,6	13,5	13,1	12,3
CLASS	0-13	0	0	0	13	0	0	0	13	0	0	0	13	0	0	7	9	0	0	11	13
MODE	0-3	0	0	0	0	0	0	0	0	3	3	3	3	0	0	0	0	0	0	3	0
EQUIPM'T	0-31	11	11	11	9	11	11	11	9	11	11	11	9	2	2	2	7	1	11	6	10
MOVEMENT	0-31	8	8	8	12	8	8	8	12	8	8	8	12	6	6	8	12	8	8	12	12
STRENGTH	0-15	11	10	11	4	12	11	11	4	14	14	14	4	9	9	8	6	7	13	9	8
RATING	0-15	7	7	7	7	7	7	7	7	7	7	7	7	6	6	7	6	8	7	6	11
RANGE	0-15	0	0	0	7	0	0	0	7	0	0	0	7	0	0	0	1	0	0	1	10
ARRIVAL	0-63	0	0	0	0	0	0	0	0	25	26	25	26	0	0	0	0	0	0	27	0
FATIGUE	0-7	5	5	5	6	5	5	5	6	7	7	7	7	6	6	6	6	5	5	7	6
EXPERIENCE	0-7	5	5	5	5	5	5	5	5	4	4	4	4	3	3	4	4	6	5	4	5
ATTACHM'T	0-4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1	1	3	1

GUADALCANAL - Map

FRONT LINE BOUNDARY

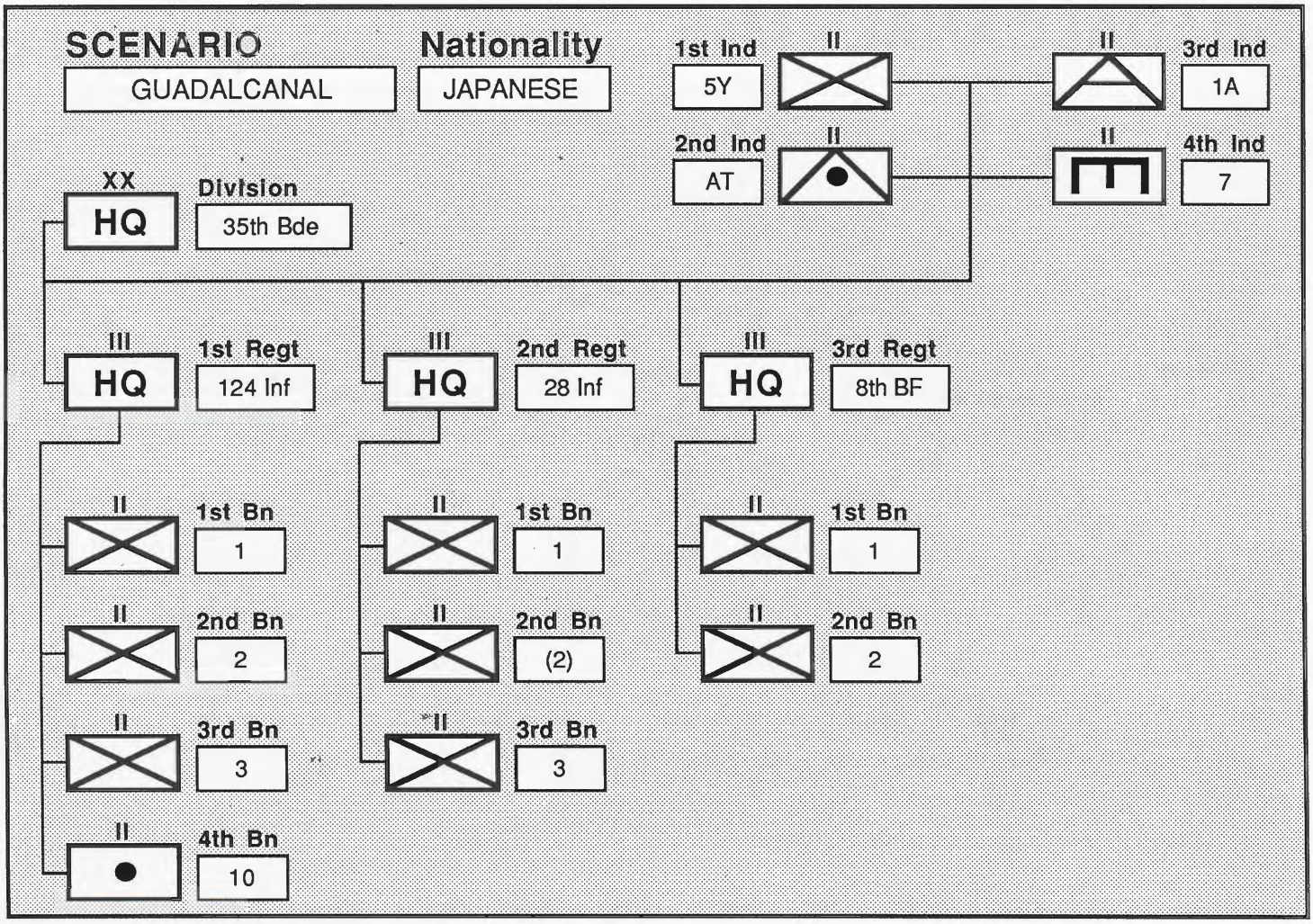


TERRAIN KEY

OCEAN	PLANTATION	HEAVY JUNGLE		
ROUGH/ JUNGLE	MOUNTAIN/ JUNGLE	SWAMP	AIRFIELD	MOUNTAIN PEAK
TRACK	FORT	TOWN	BRIDGE	RIVER

GUADALCANAL - Equipment

0		8	70mmPack	16		24	
1	Raiders	9	75mmHow	17		25	
2	Shore Gd	10	105/155H	18		26	
3	ConsUnit	11	Riflemen	19		27	
4	BaseUnit	12	75mm AA	20		28	
5	SNLF	13	Assault	21		29	
6	Lt Tanks	14	81mm MOR	22		30	
7	37mm AT	15		23		31	

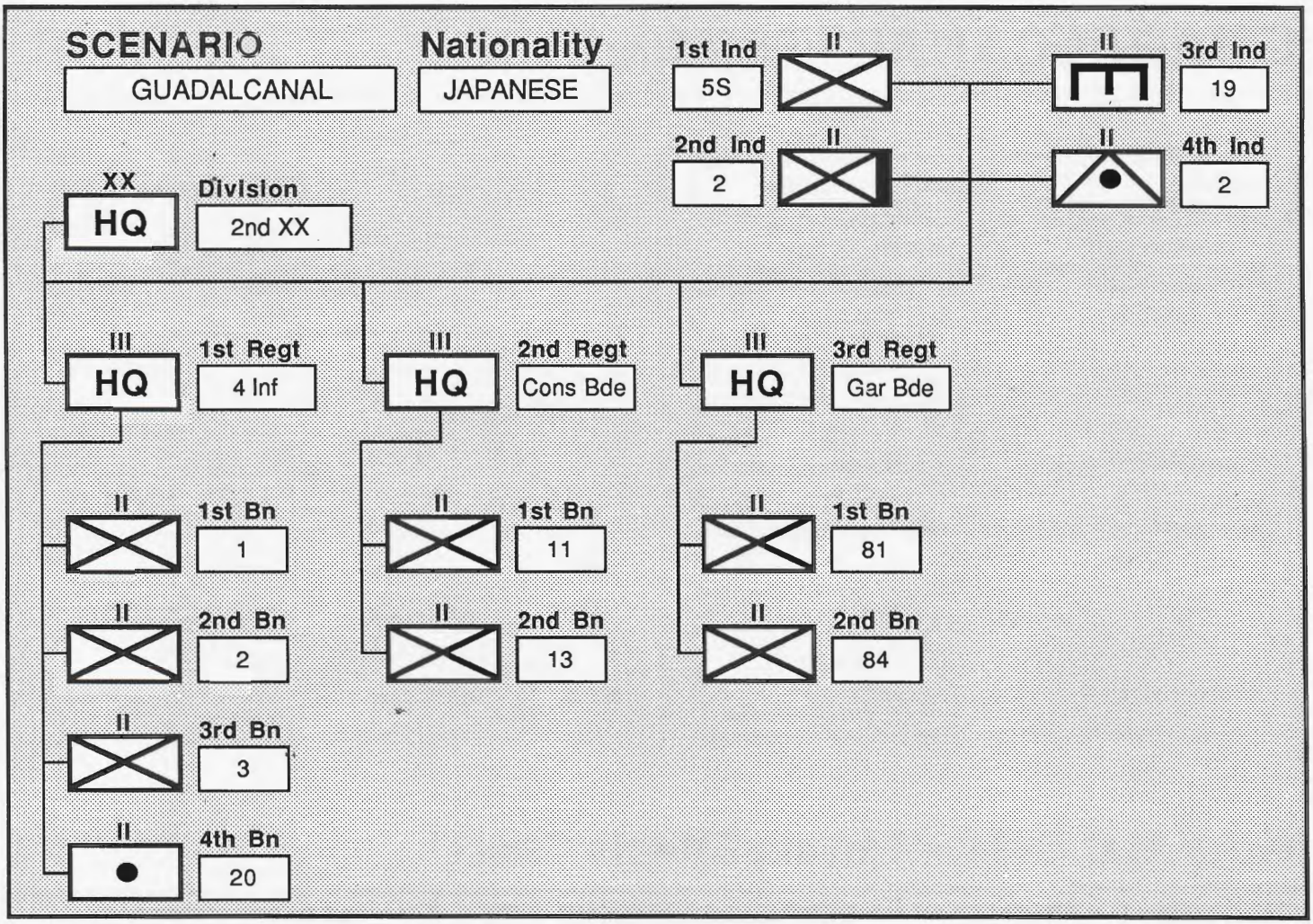


HEADQUARTERS DATA

FORMATION		XX HQ	1/RHQ	2/RHQ	3/RHQ	4/RHQ
HQ I.D.	[8]	35th Bde	124 INF	28 INF	8th BF	
UNIT TYPE	[8]	INFANTRY	INFANTRY	INFANTRY	GARRISON	
HQ ADMIN	0-7	2	2	1	2	
LEADERSHIP	0-7	6	6	3	2	
HQ SUPPLY	0-7	1	6	4	4	
ARRIVAL	0-63	0	N/A	N/A	N/A	N/A
LOCATION	(x,y)	22,6	N/A	N/A	N/A	N/A

BATTALION DATA

FORMATION	II/III	1/1	2/1	3/1	4/1	1/2	2/2	3/2	4/2	1/3	2/3	3/3	4/3	1/4	2/4	3/4	4/4	1/-	2/-	3/-	4/-
UNIT I.D.	[3]	1	2	3	10	1	(2)	3		1	2							5Y	AT	AA	7
LOCATION	(x,y)	15,8	19,6	16,8	19,8	12,9	13,9	13,8		24,3	25,2							22,4	25,2	25,2	18,9
CLASS	0-13	0	0	0	13	0	0	0		0	0							0	9	8	7
MODE	0-3	0	0	0	0	0	0	0		0	0							0	0	0	0
EQUIPM'T	0-31	11	11	11	8	11	11	11		4	4							5	7	12	13
MOVEMENT	0-31	8	8	8	6	8	8	8		6	6							8	6	6	8
STRENGTH	0-15	9	9	9	3	9	9	9		9	9							8	3	2	4
RATING	0-15	6	6	6	5	6	6	6		3	3							6	6	4	7
RANGE	0-15	0	0	0	7	0	0	0		0	0							0	1	1	0
ARRIVAL	0-63	0	0	0	0	0	63	0		0	0							0	3	7	0
FATIGUE	0-7	5	5	5	5	4	4	4		7	7							4	5	5	5
EXPERIENCE	0-7	6	6	6	6	6	6	6		2	2							7	5	5	6
ATTACHM'T	0-4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	3	3	3	1



HEADQUARTERS DATA

FORMATION		XX HQ	1/RHQ	2/RHQ	3/RHQ	4/RHQ
HQ I.D.	[8]	2nd XX	4 INF	Cons Bde	Gar Bde	
UNIT TYPE	[8]	INFANTRY	INFANTRY	GARRISON	GARRISON	
HQ ADMIN	0-7	2	2	0	0	
LEADERSHIP	0-7	5	7	1	1	
HQ SUPPLY	0-7	1	7	1	1	
ARRIVAL	0-63	6	N/A	N/A	N/A	N/A
LOCATION	(x,y)	0,5	N/A	N/A	N/A	N/A

BATTALION DATA

FORMATION	II/III	1/1	2/1	3/1	4/1	1/2	2/2	3/2	4/2	1/3	2/3	3/3	4/3	1/4	2/4	3/4	4/4	1/-	2/-	3/-	4/-
UNIT I.D.	[3]	1	2	3	20	11	13			81	84							5S	2	19	2
LOCATION	(x,y)	0,4	0,4	0,4	0,4	1,5	1,6			2,4	3,5							4,5	0,4	0,4	0,4
CLASS	0-13	0	0	0	13	0	0			0	0							0	4	7	9
MODE	0-3	0	0	0	0	0	0			0	0							0	0	0	0
EQUIPM'T	0-31	11	11	11	8	3	3			4	4							5	14	13	7
MOVEMENT	0-31	8	8	8	6	4	4			4	4							8	7	8	6
STRENGTH	0-15	9	5	9	4	9	9			7	7							8	4	4	3
RATING	0-15	6	5	6	5	0	0			2	2							6	9	7	6
RANGE	0-15	0	0	0	7	0	0			0	0							0	1	0	1
ARRIVAL	0-63	5	7	11	13	0	0			0	0							0	10	9	14
FATIGUE	0-7	5	4	5	5	3	3			3	3							5	5	5	5
EXPERIENCE	0-7	6	6	6	6	1	1			3	3							7	6	6	6
ATTACHM'T	0-4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	3	1	1	1

GUADALCANAL - Briefing

AXIS	ALLIED
SIDE [16]: JAPAN	SIDE [16]: UNITED STATES
CORPS [16]: 17th ARMY DET.	CORPS [16]: MARINE CORPS
COMMANDER [16]: Gen. Kawaguchi	COMMANDER [16]: Gen. Vandegrift

DAY	NIGHT	SUPPORT	DAY	NIGHT
6	15	QUANTITY (0-127)	12	0
1	0	RELIABILITY (0-3)	3	0
4	15	RATING (0-15)	7	0

AIR SUPERIORITY (0-7)

STATUS = 6
RELIABILITY = 4

STRONG ALLIED LIKELY

SCENARIO [16]: GUADALCANAL

BRIEFING [26]: The Attack on Bloody Ridge 12 - 21 Sep, 1942

START DATA

(1-31)	DATE =	12	12th SEP 1942
(1-12)	MONTH =	9	
(0-63)	YEAR =	42	
(1-16)	LENGTH =	10	
(0-3)	WEATHER =	3	PRECIPITATION STABLE
(0-7)	FORECAST =	4	
(0-31)	MECH MIN =	12	

GUADALCANAL - Terrain Effects Chart

TERRAIN CODE (T0-T15)	TERRAIN NAME [10]	TERRAIN COSTS PER HEX		ATTACK EFFECTS		
		MECH (0-31)	NON-MECH (0-31)	ARM (0-7)	ART (0-7)	INF (0-7)
T0	OCEAN	0	0	0	0	0
T1(RET)	-	0	0	0	0	0
T2	PLANTATION	5	3	7	7	7
T3	ROUGH/JUNG	7	5	4	5	6
T4	HVY JUNGLE	6	4	5	6	6
T5	MOUNT/JUNG	10	6	3	4	5
T6	SWAMP	12	5	4	4	6
T7	-	0	0	0	0	0
T8	AIRFIELD	2	1	7	7	7
T9	-	0	0	0	0	0
T10	MOUNT PEAK	12	6	3	4	5
T11	-	0	0	0	0	0
T12	-	0	0	0	0	0
T13	-	0	0	0	0	0
T14	-	0	0	0	0	0
T15	-	0	0	0	0	0
-	ROAD	1	1	N.A.	N.A.	N.A.
-	FORT	N.A.	N.A.	4	4	5
-	TOWN	N.A.	N.A.	7	7	7
-	BRIDGE	1	1	4	7	5
-	RIVER	N.A.	4	2	7	4

GUADALCANAL - Objectives and Misc. Factors

I.D. (1-24)	NAME [11]	MAP LOC [x,y]	START (0-63)	END (0-63)	POINTS PER TURN (0-30)	POINTS AT END (0-255)
1(AX)	Henderson	12,5	1	39	10	150
2(AX)	Kokum	9,3	1	39	1	20
3(AX)	Lunga	13,2	1	39	1	30
4(AX)	Tenaru	17,4	0	0	0	15
5(AX)	Mt Austen	5,10	0	0	0	10
6(AX)	Bloody Rid.	13,8	1	39	3	75
7(AX)	U Nalimbiu	21,8	0	0	0	10
8(AX)	-	-	-	-	-	-
9(AX)	-	-	-	-	-	-
10(AX)	-	-	-	-	-	-
11(AX)	-	-	-	-	-	-
12(AX)	-	-	-	-	-	-
1(AL)	Henderson	12,5	1	39	2	25
2(AL)	Matanikau	5,4	21	39	3	50
3(AL)	Mt Austen	5,10	29	39	3	50
4(AL)	Kokum	9,3	0	0	0	5
5(AL)	Lunga	13,2	0	0	0	5
6(AL)	Bloody Rid.	13,6	1	39	1	25
7(AL)	Tenaru	17,4	9	39	1	25
8(AL)	L Nalimbiu	22,4	19	39	2	50
9(AL)	-	-	-	-	-	-
10(AL)	-	-	-	-	-	-
11(AL)	-	-	-	-	-	-
12(AL)	-	-	-	-	-	-

ADJACENT ENEMY HEX PENALTY (0-15)

1st HEX =	0	4th HEX =	3
2nd HEX =	0	5th HEX =	4
3rd HEX =	1	6th HEX =	5

VICTORY POINTS PER STRENGTH POINT LOST (0-15)

	MECH	NON MECH
AXIS	2	2
ALLIED	3	2

MAP SIZE

ACROSS (0-2)	1
DOWN (0-3)	1

Colonel Ichiki's 28th Infantry Regiment on the following day. Brought in by a fast destroyer run three days earlier, these troops launched their vainglorious assault from the Tenaru River on the eastern end of the marine positions. The battalion was annihilated; over 800 killed from a roster of less than 900. Marine casualties did not reach 100.

Debilitated by a wide variety of exotic bacterial and fungal infections, the victory was a much needed tonic for Vandegrift's men. The myth of Japanese invincibility was demonstrably shattered.

In the next three weeks both sides did what they could to resupply and reinforce their positions on the island.

The Japanese Imperial CHQ seemed reluctant to face up to the seriousness of the threat this American operation posed. Operations in New Guinea were to take priority until the debacle of mid-September finally convinced CHQ of Guadalcanal's importance.

The rest of the 35th Bde was hastily shipped to Guadalcanal together with some elements of the 2nd Infantry Division and various support units. General Kawaguchi was placed in command. Marine dive-bombers, operating from dawn to dusk took fearful toll on the reinforcing Japanese. Only the fast destroyer runs were generally free from interdiction.

A co-ordinated assault was planned for September 13th by which stroke Henderson Field would be wrested from its defenders.

It is this battle that our Guadalcanal scenario simulates.

Supported by a nightly naval bombardment, the 28th and 124th Regiments would strike at Henderson Field from the south by way of the now fortified ridge line which would soon become known as 'Bloody Ridge'.

There were some anxious moments for the marines but, as before, the combination of inadequate planning, lack of effective artillery, poor co-ordination, tactical inflexibility and marine determination, proved too much for the Japanese and they were bloodily repulsed.

Marine air strength on the island continued to grow. The 7th Marine Regiment arrived on the 18th September together with the first tanks.

American reinforcements, and more importantly supply, poured in at a rate the Japanese could not match. Further assaults were attempted in October and November. They achieved nothing.

The American perimeter gradually expanded, pushing the Japanese forces toward Cape Esperance at the western end of the island.

In early 1943, the Japanese at last recognised the hopelessness of their position and evacuated the survivors. Paradoxically, this was their most skillfully executed operation of the campaign.

THE SCENARIO

The *Guadalcanal* scenario begins on September 12th. The Orders of Battle display the forces available and the arrival of reinforcements. The scenario briefing, terrain effects table and objective chart will provide the basis for your initial plans.

In summary, the Japanese player must time his attacks carefully. The poor resupply faclities available will quickly fritter away what resources are initially on hand if too many fruitless attacks are launched. Night attacks are best, especially so when ample naval bombardment support gets through. Even if you can't capture Henderson Field, hold as many of your secondary objectives as long as possible.

The US player has only to maintain an adequate defense until the Japanese commander runs out of supplies. He can then counter-attack. It is more productive to drive to the Matanikau River rather than the east; it is also easier. Once the 7th marines arrive, you will have more than enough manpower to launch an attack to capture your end game objectives.

The advice on tactics in the rulebook holds good. Do not ask your men to mount repeated assaults (or exploits form that matter). It will ruin them.

Regiments in reserve have the greatest chance of receiving replacements although the low supply values of the Japanese Divisional HQs make for a poor replacement rate for them. Even so, something is better than nothing.

It is tempting to place all of your support points with an assaulting regiment. Resist this impulse. Regiments on the defense in tight situations really need every point of help they can get.

Use your divisional assets wisely. The Japanese have the advantage here with two formations as opposed to the single American formation. Keep an eye on their fatigue, however; they also need rest.

Finally, keep some sort of reserve. This is probably impossibe for the American player until the 7th Marines arrive, but the Japanese player must maintain at least one fresh regiment at all times. A fresh regiment can make all the difference in a battle.

SOME VARIATIONS

There are no shortage of these! Try out any of the following that interest you.

1. In the Order of Battle for the Japanese 35th Bde, you'll notice the 2nd Battalion of the 28th Regiment has its I.D. code bracketed and its arrival date set at turn 63; well beyond the end of the game.

This is the battalion destroyed in the foolhardy charge across the Tenaru River on the 21st August. To include it in the Japanese initial strength, simply enter the battalion creation routine and alter its arrival turn from 63 to 0. Its location is already defined.

2. The delivery of reinforcements to Guadalcanal was haphazzard and unco-ordinated resulting in considerable delay and troop/materiel loss. This could have been avoided.

Increase the strength of all Japanese infantry battalions from 28th, 124th and 4th Infantry Regiments to 10 and their rating to 7. Increase the strength of all artillery battalions to 4. Increase the supply values of both Japanese divisional HQs to 3.

Advance the arrival date of the 2nd Infantry Division HQ to turn 0. All components of the division which arrive as reinforcements should have their arrival turn brought forward to turn 1.

3. Had the fighter facilities at Buin been properly prepared, the Japanese could have effectively contested American air superiority.

In the Corps Briefing routine, change the Japanese day support points to 10, their reliability to 2 and their rating to 6. Change the air superiority status to 4 and its reliability to 3.

4. The American 7th Marine Regiment was awaiting shipment to Guadalcanal from early September. Assume the transport to move it had been made available earlier.

Subtract 20 from the arrival turn of each battalion in the regiment as well as the battalion of light tanks attached to it. Thus, these battalions will arrive between turns 5 and 7.

ZITADELLE

The Air War for the Kursk Salient
5th - 11th July, 1943

A SCENARIO FOR
EUROPE ABLAZE

By Gregor Whiley

Operation Zitadelle *was Hitler's last throw of the dice in Russia. Conceived and then delayed against the advice of his Generals, it was planned to restore the initiative on the Eastern Front, which had been slipping away from the Germans since the disaster at Stalingrad in the previous summer.*

Over thirty divisions and two thousand planes were mustered to take the Russian salient centred on Kursk and annihilate its defenders. When, after armoured and aerial fighting on a collossal scale, the offensive failed, there was only the long and desperate road home for the defeated Germans.

THE SITUATION

By the summer of 1943 the Russian Front had stabilised in the south along the Donets and Mius rivers, with Kharkov back in German hands. To the north of Kharkov stretched a large Russian salient with its shoulders at Belgorad and south of Orel.

Discussion of a defensive strategy for Germany was impossible, as Hitler insisted that final victory was achievable and to even hint to the contrary was dangerous defeatism. *Zitadelle* was to be a grand envelopement attack against the Kursk salient after the fashion of the *Wehrmacht's* previous victories.

That neither the *Wehrmacht* or *Luftwaffe* were the superb striking forces that they had been was not a matter for consideration. In any case the Ninth Army, and the Fourth Panzer Army had over thirty divisions, including nineteen Panzer divisions, at their disposal. Ninth Army attacking south of Orel was supported by *Luftflotte 6* and Fourth Panzer attacking near Belgorad by *Luftflotte 4* with over 2,000 planes between them, almost 70% of the available aircraft on the Eastern Front. If the Germans had any hope left in Russia, this was it.

Unfortunately, the Russians knew they were coming. The *Lucy* spy ring had told Stalin everything except the actual date of *Zitadelle*.

While Hitler delayed the offensive to await the delivery of the new Panther and Tiger tanks, the Russians prepared for the onslaught. Formations were reinforced and re-equipped, defensive lines and strongpoints constructed in great depth, and large reserves created. Three Soviet fronts were involved, Central, Voronezh and South West, each with their attached Air Armies.

The Air Armies had been equipped with the latest products of the burgeoning Russian armanents industry and had been heavily reinforced by units from the STAVKA's special AFRLO reserve making a total of about 3,000 planes. Such reinforcements were a sure sign that life in the area so favoured was about to become very interesting!

The air war in Russia was characterised by its almost exclusively tactical nature.

ZITADELLE - Airfields

AIRFIELD NUMBER	1-127	1	2	3	4	5	6	7	8	9	10	11
AIRFIELD NAME	[11]	Mikoyan #1	Mikoyan #2	Mikoyan #3	Mikoyan #4	Mikoyan #5	Kharkov E#1	Kharkov E#2	Kharkov E#3	Kharkov E#4	Kharkov S#1	Kharkov S#1
LOCATION	(x,y)	20,15	20,15	20,15	20,15	20,15	20,16	20,16	20,16	20,16	20,16	20,16
ASSIGNED SQNS	[4]	1-3	4-6	35-38	39-42	32,33,43,44	7-9,11	10,17,18,20	19,29,34	25-28	48-50	51-53
THEATRE	1-5	2	2	2	2	2	2	2	2	2	2	2
DAMAGE STATUS	0-15	15	15	15	15	15	15	15	15	15	15	15
DAMAGE CONTROL	0-3	3	3	3	3	3	3	3	3	3	3	3
SEALED	Y/N	N	N	N	N	N	N	N	N	N	N	N
ALLIED	Y/N	N	N	N	N	N	N	N	N	N	N	N

AIRFIELD NUMBER	1-127	12	13	14	15	16	17	18	19	20	21	22
AIRFIELD NAME	[11]	Bebarovka	Zolochev	Poltava	Dnepropet#1	Dnepropet#2	Orel #1	Orel #2	Orel #3	Orel #4	Karachev #1	Karachev #2
LOCATION	(x,y)	19,15	20,15	16,18	18,22	18,22	19,6	19,6	19,6	19,6	17,5	17,5
ASSIGNED SQNS	[4]	45-47	30,31	21-24	12-14	15,16	54-56,71	57-60	61-63	90-93	64-66,72	67-70
THEATRE	1-5	2	2	2	2	2	1	1	1	1	1	1
DAMAGE STATUS	0-15	15	15	15	15	15	15	15	15	15	15	15
DAMAGE CONTROL	0-3	3	3	3	3	3	3	3	3	3	3	3
SEALED	Y/N	N	N	N	N	N	N	N	N	N	N	N
ALLIED	Y/N	N	N	N	N	N	N	N	N	N	N	N

AIRFIELD NUMBER	1-127	23	24	25	30	31	28	29	30	31	32	33
AIRFIELD NAME	[11]	Bryansk #1	Bryansk #2	Bryansk #3	Bryansk #4	Bryansk #5	Kerch #1	Kerch #2	Stalino	Minsk	Fatezh #1	Fatezh #2
LOCATION	(x,y)	16,5	16,5	16,5	16,5	16,5	21,32	21,32	24,22	2,3	20,10	20,10
ASSIGNED SQNS	[4]	73-76	77-80	81-84	85-87	88,89,94	95,96	99-102	97,98	103-106	113-116	117,118
THEATRE	1-5	1	1	1	1	1	3	3	2	1	1	1
DAMAGE STATUS	0-15	15	15	15	15	15	15	15	15	15	15	15
DAMAGE CONTROL	0-3	3	3	3	3	3	3	3	3	2	2	2
SEALED	Y/N	N	N	N	N	N	N	N	N	Y	N	N
ALLIED	Y/N	N	N	N	N	N	N	N	N	N	Y	Y

AIRFIELD NUMBER	1-127	34	35	36	37	38	39	40	41	42	43	44
AIRFIELD NAME	[11]	Fatezh #3	Kolpay #1	Kolpay #2	Livny #1	Livny #2	Kursk #1	Kursk #2	Yelets #1	Yelets #2	Yelets #3	Karocha #1
LOCATION	(x,y)	20,10	22,9	22,9	23,7	23,7	20,11	20,11	24,7	24,7	24,7	23,13
ASSIGNED SQNS	[4]	213-214	129-132	133-5,215	136-8,144	145-148	124-127	128,201-3	119-122	139-142	123,143	149-152
THEATRE	1-5	1	1	1	1	1	1	1	1	1	1	2
DAMAGE STATUS	0-15	15	15	15	15	15	15	15	15	15	15	15
DAMAGE CONTROL	0-3	2	2	2	2	2	2	2	2	22	2	2
SEALED	Y/N	N	N	N	N	N	N	N	N	N	N	N
ALLIED	Y/N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

AIRFIELD NUMBER	1-127	45	46	47	48	49	50	51	52	53	54	55
AIRFIELD NAME	[11]	Karocha #2	Karocha #3	Podolki	StaryyOsk#1	StarryOsk#2	StarryOsk#3	Obayan #1	Obayan #2	Kastornoya#1	Kastornoya#2	Kastornoya#3
LOCATION	(x,y)	23,13	23,13	22,13	23,12	23,12	23,12	21,11	21,11	23,10	23,10	23,10
ASSIGNED SQNS	[4]	153,154	169,216	165-168	160-163	164,217	175-177	178-181	182-184	155-158	170-172	159,218
THEATRE	1-5	2	2	2	2	2	2	2	2	2	2	2
DAMAGE STATUS	0-15	15	15	15	15	15	15	15	15	15	15	15
DAMAGE CONTROL	0-3	2	2	2	2	2	2	2	2	2	2	2
SEALED	Y/N	N	N	N	N	N	N	N	N	N	N	N
ALLIED	Y/N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

AIRFIELD NUMBER	1-127	56	57	58	59	60	61	62	63	64	65	66
AIRFIELD NAME	[11]	Kastornoya#4	Nov Oskol	Valuyki	Budenni #1	Budenni #2	Budenni #3	Krasnodar#1	Krasnodar#2	Krasnodar#3	Voronezh#1	Voronezh#2
LOCATION	(x,y)	23,10	24,14	24,16	25,14	25,14	25,14	28,32	28,32	28,32	26,10	26,10
ASSIGNED SQNS	[4]	173,174	185-7,219	188-190	191-194	195-198	199-200	204-207	208-211	212	220-223	224-227
THEATRE	1-5	2	3	3	3	3	3	4	4	4	2	2
DAMAGE STATUS	0-15	15	15	15	15	15	15	15	15	15	15	15
DAMAGE CONTROL	0-3	2	2	2	2	2	2	2	2	2	2	2
SEALED	Y/N	N	N	N	N	N	N	N	N	N	N	N
ALLIED	Y/N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

ZITADELLE - Centres

CENTRE NUMBER	1-63	1	2	3	4	5	6	7	8	9
CENTRE NAME	[11]	Smolensk	Minsk	Mogilev	Roslavl	Bryansk	Orel	Glukhov	Kiev	Poltava
LOCATION	(x,y)	11,0	2,3	7,3	12,4	16,5	19,6	15,10	8,15	16,18
POPULATION	0-3	0	0	0	0	0	0	0	0	0
INDUSTRY	0-3	1	2	1	0	1	1	0	2	0
PORT FACILITIES	0-3	0	0	0	0	0	0	0	3	0
COMMUNICATIONS	0-3	2	3	2	2	3	3	3	3	2
ALLIED	Y/N	N	N	N	N	N	N	N	N	N

CENTRE NUMBER	1-63	10	11	12	13	14	15	16	17	18
CENTRE NAME	[11]	Belgorad	Kharkov	Krasnograd	Cherkassy	Dnepropet.	Stalino	Mariupol	Odessa	Sevastopol
LOCATION	(x,y)	21,14	20,16	18,18	11,18	18,22	24,22	24,25	9,28	16,35
POPULATION	0-3	0	0	0	0	0	0	0	0	0
INDUSTRY	0-3	0	2	0	1	2	0	0	2	2
PORT FACILITIES	0-3	0	0	0	1	2	0	1	3	3
COMMUNICATIONS	0-3	3	3	2	2	2	2	1	2	2
ALLIED	Y/N	N	N	N	N	N	N	N	N	N

CENTRE NUMBER	1-63	19	20	21	22	23	24	25	26	27
CENTRE NAME	[11]	Kerch	Tula	Livny	Voronezh	Kursk	Stalingrad	Kotelnikov	Rostov	Krasnodar
LOCATION	(x,y)	21,32	22,1	23,7	26,10	20,11	38,18	37,22	29,24	28,32
POPULATION	0-3	0	1	1	3	1	2	1	1	0
INDUSTRY	0-3	0	3	1	2	0	1	0	1	0
PORT FACILITIES	0-3	2	0	0	2	0	2	0	0	0
COMMUNICATIONS	0-3	2	2	3	2	3	2	3	3	3
ALLIED	Y/N	N	Y	Y	Y	Y	Y	Y	Y	Y

ZITADELLE - Map

SCENARIO SEVEN
'ZITADELLE'

Allied Commands	Axis Commands
# 1 Rudenko	# 1 Von Greim
# 2 Krasovsky	# 2 Dessloch
# 3 Sudets	# 3 Crimea A.C.
# 4 Vershinin	

ZITADELLE - Squadrons

SQN NUMBER	1-255	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
SQN I.D.	[6]	1/JG52	2/JG52	3/JG52	4/JG52	S/JG52	CROAT	1/JG3	2/JG3	3/JG3	4/JG3	S/JG3	1/KG27	2/KG27	3/KG27	4/KG27	S/KG27	1/KG55
PLANE TYPE	1-37	2	2	2	2	2	2	2	2	2	2	2	8	8	8	8	8	8
OFFICIAL EST.	1-31	30	30	30	30	9	10	30	30	30	30	9	30	30	30	30	9	30
INITIAL EST.	1-31	30	30	30	30	9	10	30	30	30	30	9	30	30	30	30	9	30
VETERAN	0-31	10	8	6	8	4	3	10	8	6	8	4	6	4	2	4	2	4
EXPERIENCED	0-31	20	18	22	20	5	4	20	20	20	20	5	20	18	16	12	3	18
FATIGUE	0-7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
NIGHT OPS	Y/N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
RECON OPS	Y/N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
NAVAL OPS	Y/N	N	N	N	N	N	N	N	N	N	N	N	Y	Y	Y	Y	Y	Y
PATHFINDER	Y/N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N

SQN NUMBER	1-255	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
SQN I.D.	[6]	2/KG55	3/KG55	S/KG55	1/KG3	2/KG3	3/KG3	S/KG3	1/SG2	2/SG2	3/SG2	S/SG2	PzJagS	1/ShG1	2/ShG1	4/ShG9	S/ShG9	2F/11
PLANE TYPE	1-37	8	8	8	5	5	5	5	10	10	10	10	11	4	4	12	12	7
OFFICIAL EST.	1-31	30	30	9	30	30	30	9	30	30	30	9	10	30	30	30	9	10
INITIAL EST.	1-31	30	30	9	30	30	30	9	30	30	30	9	10	30	30	30	9	10
VETERAN	0-31	4	2	2	6	4	2	4	6	4	2	2	3	4	2	2	2	2
EXPERIENCED	0-31	18	16	3	20	18	16	2	16	18	20	4	5	15	15	16	6	4
FATIGUE	0-7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
NIGHT OPS	Y/N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
RECON OPS	Y/N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	Y
NAVAL OPS	Y/N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N
PATHFINDER	Y/N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N

SQN NUMBER	1-255	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51
SQN I.D.	[6]	1/NG6	2/NG6	3/NG6	4/NG6	5/NG6	6/NG6	7/NG6	Nst 1	Nst 2	Nst 3	1/SG77	2/SG77	3/SG77	5/1H	6/1H	102/2H	103/2H
PLANE TYPE	1-37	6	6	13	13	13	13	13	7	7	7	10	10	10	1	1	10	5
OFFICIAL EST.	1-31	10	10	10	10	10	10	10	10	10	10	30	30	30	30	30	30	10
INITIAL EST.	1-31	10	10	10	10	10	10	10	10	10	10	30	30	30	30	30	30	10
VETERAN	0-31	1	1	2	2	1	2	3	1	1	1	4	6	2	4	10	3	2
EXPERIENCED	0-31	4	4	6	3	3	4	3	3	3	3	15	20	17	14	15	7	3
FATIGUE	0-7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
NIGHT OPS	Y/N	N	N	N	N	N	N	N	Y	Y	Y	N	N	N	N	N	N	N
RECON OPS	Y/N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	Y	N	N	N	N
NAVAL OPS	Y/N	N	N	N	N	N	N	N	N	N	N	Y	Y	Y	N	N	Y	Y
PATHFINDER	Y/N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N

SQN NUMBER	1-255	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68
SQN I.D.	[6]	1/LRH	3/1RH	1/JG51	2/JG51	3/JG51	4/JG51	S/JG51	ESPANA	1/JG54	2/JG54	3/JG54	4/JG54	1 Sh14	2 Sh14	3 Sh14	1/SG1	2/SG1
PLANE TYPE	1-37	7	13	3	3	3	3	3	3	3	3	3	3	12	11	12	10	10
OFFICIAL EST.	1-31	10	10	30	30	30	30	9	10	30	30	30	30	10	10	10	30	30
INITIAL EST.	1-31	10	10	30	30	30	30	9	10	30	30	30	30	10	10	10	30	30
VETERAN	0-31	1	1	10	8	6	8	4	3	6	8	10	8	2	2	3	6	4
EXPERIENCED	0-31	4	3	20	20	20	20	4	3	24	20	20	20	4	3	3	16	19
FATIGUE	0-7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
NIGHT OPS	Y/N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
RECON OPS	Y/N	Y	Y	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
NAVAL OPS	Y/N	N	N	N	N	N	N	N	N	N	N	N	N	Y	Y	Y	Y	Y
PATHFINDER	Y/N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N

SQN NUMBER	1-255	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85
SQN I.D.	[6]	3/SG1	S/SG1	1/ZG1	S/ZG1	1/KG1	2/KG1	3/KG1	S/KG1	1/KG4	2/KG4	3/KG4	S/KG4	1/KG53	2/KG53	3/KG53	S/KG53	1/KG51
PLANE TYPE	1-37	10	10	9	9	5	5	5	5	8	8	8	8	8	8	8	8	5
OFFICIAL EST.	1-31	30	9	30	9	30	30	30	9	30	30	30	9	30	30	30	9	30
INITIAL EST.	1-31	30	9	30	9	30	30	30	9	30	30	30	9	30	30	30	9	30
VETERAN	0-31	4	3	6	3	8	7	6	2	4	5	5	3	4	5	6	2	4
EXPERIENCED	0-31	20	4	14	3	15	13	14	4	15	18	20	4	17	19	17	4	20
FATIGUE	0-7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
NIGHT OPS	Y/N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
RECON OPS	Y/N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
NAVAL OPS	Y/N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
PATHFINDER	Y/N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N

SQN NUMBER	1-255	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102
SQN I.D.	[6]	2/KG51	3/KG51	4/KG51	S/KG51	1/NG8	2/NG8	3/NG8	3F/11	Nst 4	1/JG11	2/JG11	3/JG11	4/JG11	1/KG4	2/KG4	1/NG9	2/NG9
PLANE TYPE	1-37	5	5	5	5	6	13	13	7	7	2	2	2	2	5	5	13	13
OFFICIAL EST.	1-31	30	30	30	9	10	10	10	10	10	30	30	30	30	30	30	10	10
INITIAL EST.	1-31	30	30	30	9	10	10	10	10	10	30	30	30	30	30	30	10	10
VETERAN	0-31	6	6	5	4	2	1	2	1	2	8	10	6	7	6	4	2	2
EXPERIENCED	0-31	18	17	15	3	4	3	2	4	3	20	16	14	12	18	20	3	4
FATIGUE	0-7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
NIGHT OPS	Y/N	N	N	N	N	N	N	N	N	Y	N	N	N	N	N	N	N	N
RECON OPS	Y/N	N	N	N	N	Y	Y	Y	Y	Y	N	N	N	N	N	N	Y	Y
NAVAL OPS	Y/N	Y	Y	Y	Y	N	N	N	N	N	N	N	N	N	Y	Y	N	N
PATHFINDER	Y/N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N

SQN NUMBER	1-255	103	104	105	106	113	114	115	116	117	118	119	120	121	122	123	124	125
SQN I.D.	[6]	1/Lehr	2/Lehr	3/Lehr	4/Lehr	54G/I	127/I	160/I	166/I	171/I	179/I	301/B	302/B	303/B	304/B	305/B	58/S	140/S
PLANE TYPE	1-37	2	2	2	2	19	18	18	18	18	18	20	20	20	20	20	21	21
OFFICIAL EST.	1-31	30	30	30	30	30	30	30	30	30	30	25	25	25	25	25	30	30
INITIAL EST.	1-31	30	30	30	30	26	26	26	26	26	26	25	25	25	25	25	30	30
VETERAN	0-31	1	1	1	1	8	4	5	4	4	3	4	3	5	5	4	4	5
EXPERIENCED	0-31	4	4	4	4	13	11	11	13	9	11	10	9	11	15	13	17	14
FATIGUE	0-7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
NIGHT OPS	Y/N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
RECON OPS	Y/N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
NAVAL OPS	Y/N	N	N	N	N	N	N	N	N	N	N	Y	Y	Y	Y	Y	Y	Y
PATHFINDER	Y/N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N

ZITADELLE - Squadrons (Cont.)

SQN NUMBER	1-255	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142
SQN I.D.	[6]	175/S	309/S	310/S	63/1GI	64/1GI	65/1GI	66/1GI	67/1GI	1/6I	2/6I	3/6I	4/6I	5/6I	1/3B	2/3B	3/3B	4/3B
PLANE TYPE	1-37	21	21	21	17	17	17	17	17	19	19	19	19	19	20	20	20	20
OFFICIAL EST.	1-31	30	30	30	30	30	30	30	30	30	30	30	30	30	25	25	25	25
INITIAL EST.	1-31	30	30	30	30	30	30	30	30	30	30	30	30	30	25	25	25	25
VETERAN	0-31	4	4	4	8	6	6	10	10	2	3	4	5	5	4	8	6	4
EXPERIENCED	0-31	12	11	14	17	19	19	19	15	10	15	13	18	10	11	15	11	13
FATIGUE	0-7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
NIGHT OPS	Y/N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
RECON OPS	Y/N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
NAVAL OPS	Y/N	Y	Y	Y	N	N	N	N	N	N	N	N	N	N	Y	Y	Y	Y
PATHFINDER	Y/N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N

SQN NUMBER	1-255	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159
SQN I.D.	[6]	5/3B	1/6C	2/6C	3/6C	4/6C	5/6C	5G/I	8G/I	32G/I	32/I	40/I	41G/I	311/B	312/B	313/B	314/B	315/B
PLANE TYPE	1-37	20	18	21	21	21	21	19	19	19	18	18	19	20	20	20	20	20
OFFICIAL EST.	1-31	25	30	30	30	30	30	30	30	30	30	30	30	25	25	25	25	25
INITIAL EST.	1-31	25	30	30	30	30	30	26	26	26	26	26	26	25	25	25	25	25
VETERAN	0-31	6	8	8	5	2	6	5	10	11	4	3	8	2	3	4	4	4
EXPERIENCED	0-31	15	10	10	15	12	14	16	13	12	9	11	13	11	12	14	13	10
FATIGUE	0-7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
NIGHT OPS	Y/N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
RECON OPS	Y/N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
NAVAL OPS	Y/N	Y	N	Y	Y	Y	Y	N	N	N	N	N	N	Y	Y	Y	Y	Y
PATHFINDER	Y/N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N

SQN NUMBER	1-255	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176
SQN I.D.	[6]	62/S	90G/S	141/S	142/S	143/S	1/4I	2/4I	3/4I	4/4I	5/4I	1/1B	2/1B	3/1B	4/1B	5/1B	165/1S	166/1S
PLANE TYPE	1-37	21	21	21	21	21	17	17	17	17	17	20	20	20	20	20	21	21
OFFICIAL EST.	1-31	30	30	30	30	30	30	30	30	30	30	25	25	25	25	25	30	30
INITIAL EST.	1-31	30	30	30	30	30	26	26	26	26	30	25	25	25	25	25	30	30
VETERAN	0-31	5	11	5	4	2	7	5	4	5	8	5	2	4	3	3	5	5
EXPERIENCED	0-31	11	18	13	14	12	11	13	17	11	12	9	12	14	12	13	13	10
FATIGUE	0-7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
NIGHT OPS	Y/N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
RECON OPS	Y/N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
NAVAL OPS	Y/N	Y	Y	Y	Y	Y	N	N	N	N	N	Y	Y	Y	Y	Y	Y	Y
PATHFINDER	Y/N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N

SQN NUMBER	1-255	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193
SQN I.D.	[6]	198/1S	667/1S	672/1S	1/5S	2/5S	3/5S	4/5S	5/5S	438/I	283/I	512/I	519/I	581/I	728/I	321/B	322/B	323/B
PLANE TYPE	1-37	21	21	21	21	21	21	21	21	18	18	18	18	18	18	20	20	20
OFFICIAL EST.	1-31	30	30	30	30	30	30	30	30	30	30	30	30	30	30	25	25	25
INITIAL EST.	1-31	30	30	30	30	30	30	30	30	26	26	26	26	26	26	25	25	25
VETERAN	0-31	5	4	6	8	6	4	5	4	5	2	4	3	8	7	8	2	3
EXPERIENCED	0-31	13	14	15	13	12	11	14	9	15	14	15	12	9	12	13	11	15
FATIGUE	0-7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
NIGHT OPS	Y/N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
RECON OPS	Y/N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
NAVAL OPS	Y/N	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	N	N	N	Y	Y	Y
PATHFINDER	Y/N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N

SQN NUMBER	1-255	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210
SQN I.D.	[6]	324/B	325/B	93/S	176G/S	525/S	614/S	812/S	347/R	348/R	349/R	240/I	270/I	152/I	88G/I	335/B	336/B	337/S
PLANE TYPE	1-37	20	20	21	21	21	21	21	24	24	24	19	19	19	17	20	20	21
OFFICIAL EST.	1-31	25	25	30	30	30	30	30	25	25	25	30	30	30	30	25	25	30
INITIAL EST.	1-31	25	25	30	30	30	30	30	25	25	25	26	26	26	26	25	25	30
VETERAN	0-31	4	4	3	10	5	4	4	6	8	6	7	6	4	9	3	4	5
EXPERIENCED	0-31	12	11	14	15	17	15	15	15	18	13	16	14	16	16	13	10	14
FATIGUE	0-7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
NIGHT OPS	Y/N	N	N	N	N	N	N	N	Y	Y	Y	N	N	N	N	N	N	N
RECON OPS	Y/N	N	N	N	N	N	N	N	Y	Y	Y	N	N	N	N	N	N	N
NAVAL OPS	Y/N	Y	Y	Y	Y	Y	Y	Y	N	N	N	N	N	N	N	Y	Y	Y
PATHFINDER	Y/N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N

SQN NUMBER	1-255	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227
SQN I.D.	[6]	338/S	339/S	340/R	341/R	342/R	343/R	344/R	345/R	346/R	1/LRB	2/LRB	3/LRB	4/LRB	5/LRB	6/LRB	7/LRB	8/LRB
PLANE TYPE	1-37	21	21	22	22	22	22	22	22	22	23	23	23	23	23	23	23	23
OFFICIAL EST.	1-31	30	30	25	25	25	25	25	25	25	30	30	30	30	30	30	30	30
INITIAL EST.	1-31	30	30	25	25	25	25	25	25	25	30	30	30	30	30	30	30	30
VETERAN	0-31	6	5	6	5	4	3	4	5	6	4	5	5	4	1	2	5	6
EXPERIENCED	0-31	16	18	10	9	11	10	9	14	10	20	16	14	15	18	20	16	16
FATIGUE	0-7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
NIGHT OPS	Y/N	N	N	N	N	N	N	N	N	N	Y	Y	Y	Y	Y	Y	Y	Y
RECON OPS	Y/N	N	N	Y	Y	Y	Y	Y	Y	Y	N	N	N	N	N	N	N	N
NAVAL OPS	Y/N	Y	Y	N	N	N	N	N	N	N	Y	Y	Y	Y	Y	Y	Y	Y
PATHFINDER	Y/N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N

ZITADELLE - Ground Units (See Note A)

UNIT #	1-63	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
I.D. CODE	[1]	G	G	G	G	G	G	G	G	G	R	R	R	R	R	R	R	R	R	R	R	R	R
LOCATION	(x,y)	20,7	20,8	19,8	18,8	19,13	19,14	20,14	21,15	21,16	21,6	21,7	21,8	20,9	19,9	18,9	18,13	19,12	20,13	21,13	22,14	22,15	22,16
DENSITY	0-7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
ALLIED	Y/N	N	N	N	N	N	N	N	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

ZITADELLE - Plane Types

PLANE NUMBER	1-37	1	2	3	4	5	6	7	8	9	10	11	12	13	17
PLANE TYPE	[11]	Bf 109F	Bf 109G-6	Fw 190A	Fw 190F-3	Ju 88A-4	Bf 109G-8	Ju 88D-1	He 111H	Bf 110F-2	Ju 87D	Ju 87G	Hs 129	Fw 189	La 5FN
ROLE	0-3	0	0	0	1	2	3	3	2	1	2	2	2	3	0
CREW	0-7	1	1	1	1	4	1	4	5	2	2	2	1	3	1
FUEL	1-255	22	25	26	35	85	25	135	83	42	63	63	29	35	33
PAYLOAD	0-63	0	0	0	7	26	0	0	24	4	13	10	10	0	1
SERVICE CEILING	11-41	36	39	37	37	27	36	29	26	35	24	24	29	23	31
MAXIMUM SPEED	0-41	19	19	20	18	14	19	18	13	17	13	13	13	11	20
OPT. ALTITUDE	0-31	20	23	20	20	20	19	15	16	20	14	12	13	8	21
CRUISING SPEED	0-31	16	14	15	15	12	16	13	11	12	8	9	10	10	15
CLIMB RATE	0-15	15	15	12	11	4	15	5	2	11	7	7	8	5	15
FIREPOWER	0-7	4	4	5	5	2	3	1	3	5	1	2	5	1	4
MANOEUVER.	0-7	6	6	7	5	2	5	3	2	3	4	4	3	4	6
VULNERABILITY	0-7	4	5	5	5	4	4	4	3	3	3	4	5	2	5
RADAR	0-7	4	4	4	4	0	0	0	0	4	0	0	0	0	2
REPL. RATE	0-7	2	5	4	2	4	0	1	4	2	4	2	1	2	5
ECM	0-7	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ALLIED	Y/N	N	N	N	N	N	N	N	N	N	N	N	N	N	Y
NIGHT	Y/N	N	N	N	N	N	N	N	N	N	N	N	N	N	N

PLANE NUMBER	1-37	18	19	20	21	22	23	24
PLANE TYPE	[11]	Yak 7B	Yak 9	Pe 2	Il 2m3	Yak 9R	Il 4	Pe 2R
ROLE	0-3	0	0	2	2	3	2	3
CREW	0-7	1	1	3	2	1	3	3
FUEL	1-255	20	36	42	36	36	72	60
PAYLOAD	0-63	0	0	9	10	0	16	0
SERVICE CEILING	11-41	33	35	29	20	35	32	30
MAXIMUM SPEED	0-41	19	20	17	12	20	13	18
OPT. ALTITUDE	0-31	16	20	16	10	20	22	20
CRUISING SPEED	0-31	15	14	13	10	14	10	13
CLIMB RATE	0-15	15	15	11	7	15	9	11
FIREPOWER	0-7	3	3	3	4	3	2	2
MANOEUVER.	0-7	5	6	3	3	6	3	3
VULNERABILITY	0-7	5	5	4	6	5	3	4
RADAR	0-7	2	2	0	0	0	0	0
REPL. RATE	0-7	6	4	3	5	3	4	3
ECM	0-7	0	0	0	0	0	0	0
ALLIED	Y/N	Y	Y	Y	Y	Y	Y	Y
NIGHT	Y/N	N	N	N	N	N	N	N

Note A

1. In this scenario, shipping lanes have been replaced with ground units. To attack a ground unit, you must use the shipping lane procedure.

2. Russian radar stations represent advance warning information from partisans operating behind German lines.

ZITADELLE - Radar Stations (See Note A)

RADAR STATION #	1-63	1	2	3	4	5	6	7	8	9	10	11	12
I.D. CODE	[1]	F	F	F	F	F	F	F	F	R	R	R	R
LOCATION	(x,y)	14,2	19,7	16,10	17,13	21,14	20,18	25,21	24,32	21,5	21,9	18,11	23,15
MIN. DET. ALT.	1-15	1	1	1	1	1	1	1	1	1	1	1	1
MAX. DET. ALT.	1-41	41	41	41	41	41	41	41	41	25	25	25	25
RANGE	1-8	5	5	5	5	5	5	5	5	7	7	7	7
RELIABILITY	0-3	2	2	2	2	2	2	2	2	1	1	1	1
DAM. STATUS	0-15	15	15	15	15	15	15	15	15	15	15	15	15
DAM. CONTROL	0-3	2	2	2	2	2	2	2	2	3	3	3	3
360 SCAN	Y/N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
ALLIED	Y/N	N	N	N	N	N	N	N	N	Y	Y	Y	Y

ZITA. - Time

DATE	1-31	5
MONTH	1-12	7
YEAR	0-63	43
LENGTH	1-31	7
DAWN	3-10	5
DUSK	15-22	19
MOON	0-27	8
FORECAST	0-3	0

ZITA. - Weather

C = 2 W = 3	C = 4 W = 1	C = 1 W = 0
C = 3 W = 1	C = 2 W = 1	C = 1 W = 0
C = 3 W = 2	C = 3 W = 1	C = 2 W = 1
C = 4 W = 2	C = 3 W = 2	C = 3 W = 1

ZITADELLE - Doctrine

NATIONALITY		AXIS	ALLIES
MISSIONS	0-15	0	0
POPULATION	0-7	1	0
INDUSTRY	0-7	1	1
COMMUNICATIONS	0-7	7	7
PORT FACILITIES	0-7	2	2
AIRFIELDS	0-7	7	7
RADAR	0-7	0	0
SHIPPING LANES	0-7	7	7
SUPREME COM.	0-7	5	5
C-IN-C	0-7	4	5
GROUND ECM	0-7	0	0
ORDNANCE EFFECT	0-3	3	2
AA FIRE CONTROL	0-3	3	2

ZITA. - Axis Commands

	NAME	CURSOR	THRSH.	PRIOR.
C-IN-C	GOERING	3	N.A.	N.A.
COMMANDER #1	VON GREIM	3	160	6
COMMANDER #2	DESSLOCH	3	150	6
COMMANDER #3	CRIMEA A.C.	3	20	4
COMMANDER #4	-	-	-	-
COMMANDER #5	-	-	-	-

ZITA. - Allied Commands

	NAME	CURSOR	THRSH.	PRIOR.
C-IN-C	NOVIKOV	2	N.A.	N.A.
COMMANDER #1	RUDENKO	2	290	7
COMMANDER #2	KRASOVSKY	2	420	7
COMMANDER #3	SUDETS	2	120	7
COMMANDER #4	VERSHININ	2	30	5
COMMANDER #5	-	-	-	-

ZITADELLE - Flak Units

FLAK UNIT #	1-63	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
I.D. CODE	[1]	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
LOCATION	(x,y)	11,0	2,3	7,3	12,4	16,5	17,5	19,6	15,10	8,15	16,18	21,14	20,15	19,15	20,16	18,18	11,18	18,22	24,22	24,25	9,28	16,35
AA GUNS	1-255	24	36	12	24	54	36	60	24	18	12	54	36	36	54	24	12	30	42	30	18	18
ALLIED	Y/N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N

FLAK UNIT #	1-63	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42
I.D. CODE	[1]	P	A	A	A	A	A	A	A	A	A	C	C	C	C	C	C	C	C	C	C	C
LOCATION	(x,y)	21,32	20,7	20,8	19,8	18,8	19,13	19,14	20,14	21,15	21,16	22,1	23,7	24,7	22,9	20,10	20,11	21,11	23,10	26,10	22,13	23,12
AA GUNS	1-255	36	56	56	56	56	56	56	56	56	56	20	44	18	22	22	36	18	18	42	18	18
ALLIED	Y/N	N	N	N	N	N	N	N	N	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

FLAK UNIT #	1-63	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63
I.D. CODE	[1]	C	C	C	C	C	C	C	C	U	U	U	U	U	U	U	U	U	U	U	U	U
LOCATION	(x,y)	23,13	24,14	25,14	24,16	38,18	37,22	29,24	28,32	21,6	21,7	21,8	20,9	19,9	18,9	18,13	19,12	20,13	21,13	22,14	22,15	22,16
AA GUNS	1-255	18	18	18	18	44	8	28	12	56	56	56	56	56	56	56	56	56	56	56	56	56
ALLIED	Y/N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

Both sides used their forces as flying artillery although for slightly different reasons. The *Luftwaffe* had only ever been defined as a close support arm. Confusion and incompetence at the top meant that it never successfully defined and accomplished a more strategic role.

The same incompetence and confusion meant that by 1943 the *Luftwaffe* was operating from an inadequate logistical base, lacking in men, machines and fuel. There was simply not enough to go around, and the weakened state of the *Wehrmacht* meant that demand for air support would always exceed supply. However, wherever the *Luftwaffe* did operate it was superior to its opponent and and Kursk it achieved a formidable concentration.

The Red Air Force was definitely on the way up by 1943. It had not, and would never completely recover, from the trauma of the pre-war years and the disasters of 1941. Pilot training and morale was at times uncertain and the organisation of the Air Force suffered from some severe defects. A basic expression of this was a lack of individuality and flexibility in the thinking of all levels of the Air Force.

Soviet flyers were capable of adhering rigidly to a battle plan, even in the face of certain destruction, or abandoning all thoughts of the mission and going home. Commanders had to do precisely what they were ordered, regardless of changed circumstances. Only Stalin seemed to be allowed to change a plan. However, the Red Air Force, like the Army, worked around these problems.

At Kursk the air forces were better equiped and led than they had been in the previous year. Relative successes at Stalingrad and the Kuban peninsular had raised morale. Indeed certain units, mostly Guards or *Sturmovik* were every bit as tough as the Germans. Necessarily, the Red Air Force substantially outnumbered the *Luftwaffe* and was determined to gain the advantage at last.

THE SCENARIO

Although *Europe Ablaze* is an immensely detailed game it necessarily takes a strategic view of things. In order to simulate the tactical nature of the Eastern Front air war a few slight artifices have been necessary. The hexes on either side of the front which contained the ground formations involved in the fighting are marked with tank and/or infantry symbols. These are actually entered in the game as sea lanes! All bombers on either side are capable of Naval Ops. There are no other sea lane hexes in the game.

When you wish to strike against enemy ground units, you must access them as though they were shipping lanes.

Each special front line hex has been given a high flak value to relect the high risks of low level attacks on dense ground formations.

To simulate the provision of information by partisan units behind the German lines, we have added four radar stations to the Russian Order of Battle.

The ground attack aircraft Hs 129, Fw 190F-3 and Il-2 have been given a payload in excess of their actual bomb load to reflect the effectiveness of the anti-tank cannon, bombs or rockets that they carried.

The Russians had large numbers of Po-2's, an obsolete bi-plane which they used for night nuisance bombing. In the interests of reasonable airplane numbers and given their irrelevance to the battle at Kursk, they have been omitted. The Germans retaliated with obsolete bi-planes of their own and these and night fighters may be added if desired. Small forces are represented in the Kuban peninsular and Kerch areas as fighting here was virtually continuous.

The scenario lasts for seven days. On the twelfth, with no breakthrough in the north and things finely balanced in the south, the Soviets launched a counter attack north of the salient aimed at Orel and Bryansk. In the south a massive tank battle at Prokhorovka resulted in tremendous casualties but no breakthrough. The battle for Kursk and the *Wehrmacht's* last offensive hopes for the Eastern Front had been defeated.

SOME VARIATIONS

Well, not too many for this scenario.

Disk subscribers will note that the *Zitadelle* scenario disk also contains the 15th Air Force scenario from the Design Manual. This is in response to dozens of letters over the past six months.

Both sides produced a maximum effort at Kursk. Just about every available aircraft was thrown into the struggle for air superiority and consequently, effective ground support.

1. We could be very generous to Germany and allow them to introduce the peerless *Schwalbe* (Swallow), better known as the Me 262A, to this contest. Replace the existing fighters in up to 6 *Jagdgeschwaden* with the same number of Me262As. (The characteristics are - 25, Me262 A1, 0,1, 24, 0, 36, 27, 22, 22, 15, 6, 5, 6, 4, 4, 0, N, N.)

2. Similarly, we can make things tough for them. Suppose the Allied landings on Sicily had come a little earlier. Remove 4 *Kampfgeschwaden*, 6 *Jagdgeschwaden* and 2 recon units. The fighters must be Bf 109Gs or Fw 190As. The bombers and recon can be of any type.

BATTLE OF ANTIETAM
17th September, 1862

David Landrey and Chuck Kroegel present their view of America's Bloodiest Day

On the morning of 17th September 1862 a harried Army of Northern Virginia numbering 35,000 men stood with its back to the Potomac River. Across Antietam Creek the 67,000 strong Army of the Potomac deployed to crush its adversary. It should have been a walkover. Instead, the Union Commander George B. McClellan, managed to bungle the opportunity and the Confederate army was allowed to slip away to fight again.

Strategic Simulation Inc's *Battle of Antietam* comes packed in a standard SSI box, containing a double sided 5.25" disk, a plastic coated data card and rule book; all produced to the usual high SSI standard. The rule book is brief, to the point and tells you nearly all you need to know. It also contains a well written account of the battle and the events leading up to it, complemented with some good maps. My only criticism of the physical components is that a second data card would have been useful for two player games.

Booting up the game is straightforward and you are immediately into the player options. There are a large number of these but broadly speaking they include -

(i) Choice of Side - the computer can play itself.

(ii) Handicapping.

(iii) Level of Game - beginner, intermediate and advanced. All levels are quite enjoyable, the higher levels simply adding more features such as command control and leaders. The basic game is a good introduction for people not used to computer games.

(iv) Move Time Limits - useful if you have opponents who take a long time moving.

(v) Activation - a must for a balanced game. Under this option, the number of divisions the Union player may move is severely restricted.

(vi) Hidden Movement - enemy units are not displayed on the map unless in the line of sight of at least one of your own units. Another nice feature.

* * * * *

Once the options have been chosen, they cannot be changed, which is a disappointment. Some options could not be changed, of course, such as game level and handicapping, but it would be nice to be able to swap sides if the computer is giving you a hiding.

The screen is clear in monochrome and really comes up well in colour. There is a lot of different terrain - slopes, cornfields, towns, woods, fords, rivers etc - on a 42 by 36 grid square. Not all of the map can fit on the screen at once and thus it scrolls back and forth as you move the cursor around. There is no facility to see the whole screen and it is not really necessary.

Each unit represents a half brigade for infantry and cavalry and about three batteries for artillery. The game scale is 183 metres to the grid square and 1 hour per turn. Information on enemy units is very limited; you know only their location (and not always that if using the *hidden movement* option). There is no indication as to strength or abilities. This creates an excellent *fog of war* environment.

The game proceeds sequentially, each game turn beginning with both players tracing command control, reviving battered troops and resupplying those without ammunition. This is all done by the computer.

Then comes a Union movement and combat phase, followed by Confederate combat and movement, a mid-turn recovery phase where disruption can be removed and ammunition resupplied and then a second movement and combat phase for the Union and Confederate. At the end of the turn, a full body count and victory point update is given.

During his turn the player moves, designates target priorities if desired and

TITLE	-	**Battle of Antietam**
AUTHOR	-	**Landrey/Kroegel**
PUBLISHER	-	**Strategic Simulations Inc 883 Stierlin Rd, Bldg A-200 Mountain View, CA. 94043 U.S.A.**
FORMAT	-	**Apple/Atari/C-64 one/two drives**
PRICE	-	**$60 (US), $90 (AUST)**
REVIEWED BY	-	**Mark Holman**

orders advance after combat and melees. At the end of his turn the computer takes over, resolving, in order, artillery fire, infantry fire and finally melees. The defender always fires before the attacker's fire is resolved in each of the above segments, and in the case of melees receives an additional defensive fire phase, so assaults have to be carefully planned and carried out in the knowledge that heavy losses will be suffered.

The movement and combat system makes excellent use of the computer's number crunching ability. Each unit is rated for number of men, weapon type, fatigue, morale and effectiveness. Losses are calculated on a per man basis (it even gives killed, wounded and missing - always the same proportions; but a nice piece of chrome).

Fatigue is constantly updated depending on terrain traversed or casualties taken, while morale is reduced by fatigue and refreshed by taking a unit out of the battle line. Fire combat can disrupt units which prevents them carrying out melees, while attackers can gain ground or be repulsed from melees. If a unit's morale falls too low, it may rout after taking casualties and if below a certain strength, routed units will not rally.

* * * * *

The smoke of battle obscures artillery targets, units run out of ammunition at random and critical moments, leaders can help rally men, lead them to greater glory and get shot - its all great stuff, as much detail as you could ever want.

Leadership and command control are a major factor in the game and it is a delight to see the emphasis placed on them. Divisional commanders (and corps commanders for the Union) have a command span. Any subordinate unit outside this command span has its movement reduced by half, cannot rally if routed and cannot be resupplied if out of ammunition. A proper emphasis is therefore placed on maintaining higher unit cohesion.

Leaders also increase the fire strength of units they are stacked with and the closer units are to their leader, the better their chance of being resupplied. When leaders take losses (they do not die; just get wounded so they can gasp out some famous last words and die later in the best Civil War tradition), replacement leaders are promoted though there seems to be one problem with this feature as noted later.

The computer does take a while to get through its moves if you do not have have a speed card, but it is not unbearably slow.

I do have a number of criticisms of the movement system, which I found more than a little tedious. To move units you have to locate them with the cursor and move them one by one to the desired spot. Once you get there the next unit in the order of battle is automatically located, moved by you and so on. The designers have made players responsible for every hop, step and jump each unit takes.

When you think that each side has the best part of 100 or more units, this can mean a lot of work. To my mind, it would be desirable to allow players the option to identify objectives on the map and order units to proceed towards them in divisional groupings at their best pace. This style of facility already exists in SSI's *Kampfgruppe* and *Mech Brigade* and works, except with rivers.

I appreciate that *Antietam* is a radically different game and a system of moving units on a 'grouped' basis would not be easy to program, but on the other hand the game's movement system is little better than a board game. The design in this aspect does not reduce player load so that he can concentrate on decision making.

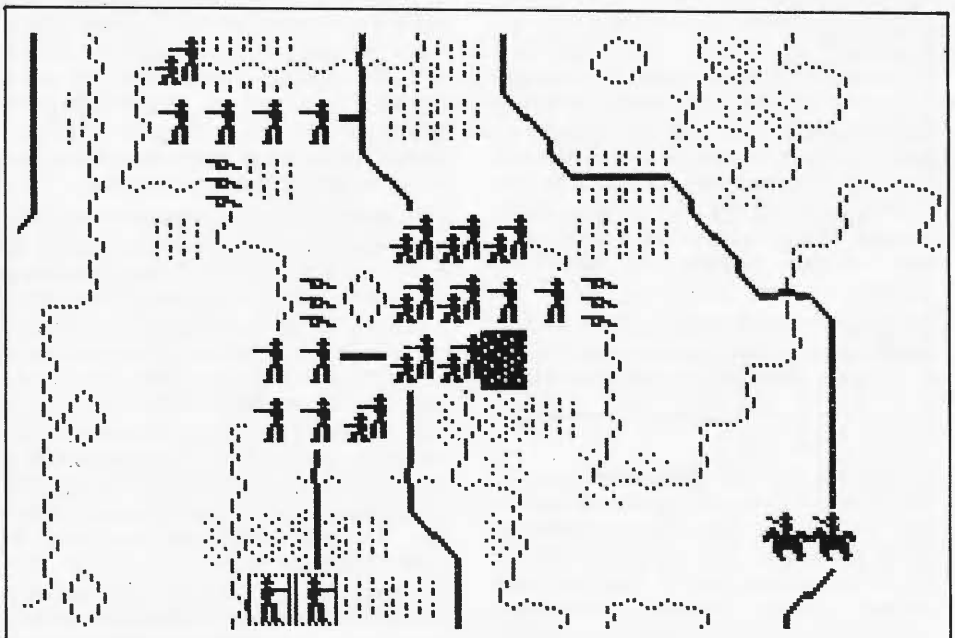
Even if a group movement system could not be developed, I am sure a better method for cycling through units could be. The units basically operate in divisional/corps groupings for the Union and divisional groupings for the Confederate. When moving units you cycle through them one at a time. If you miss a unit, you cannot go back to it, you have to either cycle forward or try to locate it manually. At various times whole divisions will not be moving due to activation restrictions, yet you have to cycle through them all to get to active units. The game in my view would be improved immensely if -

(I) a cycle back facility was available,

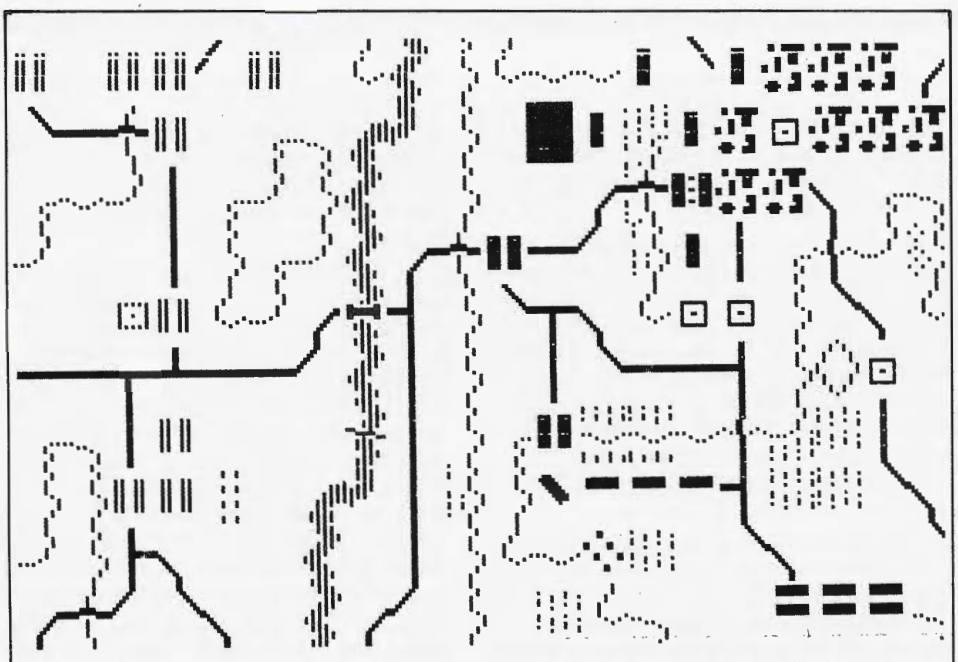
(ii) whole divisions could be skipped when locating units and

(iii) you could cycle around the units within one division/corps.

Once movement is complete, a few quick key strokes take you into combat, which



The Tactical Screen from the Basic Game
Confederate Units face to the right, Union units face to the left.



The Tactical Screen from the Advanced Game

Confederate Units are the solid rectangles, Union units are hollow rectangles.

the computer plays out before your eyes, showing each combat and the carnage committed.There are no sound effects, personally I like them and would prefer to have them available. The options allow varying times for information concerning casualties to be on the screen, depending on whether you want a quick impression or want to write it all down (you would have to be keen). The combat system works well, combining the firing unit's weapon type, number of men or guns, fatigue and unexpended movement points to come up with a number that is further modified by the target unit's density, range, terrain and facing. The result is the number of casualties inflicted.

The whole thing is pretty exciting as you watch the combat progress and your plans either come off or end in disaster.

I have only two criticisms of the combat system. These are -

(i) Routed men run back four squares and then can only be moved one square per turn until they rally. This is a common game technique which probably has its origins in Richard Berg's *Terrible Swift Sword* . In reality, however, units did not rout en masse so much as the less willing members of the unit (about 95% of those present) tended to drift off in the opposite direction to where the fighting was. These were casualties in a real sense, but if the unit was pulled out of action and the straggler pickets were doing their job, they could be regained. In my mind routs should only occur when units are reduced below the non recovery level (300 men for the Union, 100 for the Confederates), while casualties should be higher with an ability to recover stragglers. A similar system is used in West End's *Shiloh/ South Mountain* games and should not be difficult to adapt to the computer. It is of course conceded that catastrophic routs did occur in many battles - Shiloh and Chancellorsville to name but two - however Antietam was fought with great courage and determination by the common soldiers of both sides and mass panic was not a feature of that day.

(ii) Leader promotion becomes a problem if too many of them meet their maker. In one game I played, the Union 1st Corps Commander and his three divisional commanders were all rendered *hors de combat* (it was a bad day, I can tell you!) The program did recognise the senior brigade commander as the new corps commander but would not let him transfer to a unit outside his division as an original corps commander, or divisional commander promoted to replace him, can. This can have a serious effect on your ability to move men, rally and resupply them. It may be that this is a deliberate feature to reflect the serious command problems which would doubtlessly arise given so many senior officer casualties. If so, it would have been nice to have had it confirmed in the rules.

* * * * *

As your opponent, the computer can give a novice player a fearful time, however its mode of play is not too hard to work out and once done so, it is an easy-beat. This is especially so when when I played the Confederate. I found that moving men and artillery to the edge of slopes and building fortifications created an extremely tough defensive line that the machine threw its men against in true McClellan style. There was no subtlety, no attempt to turn flanks, avoid strong points or bring up close range artillery to blast me out of them. The result was a slaughter. In addition, if playing solo and using the command control restriction, the Union corps are released at predetermined times known to the Confederate. Hence, he can strip his line at points, knowing that the enemy troops opposite will not move. Allowing the computer the choice of which divisions to move would add a lot of anxiety to the Confederate player's job.

As the Confederate, the computer does do a much better job but generally it is programmed to seek out good defensive terrain and will not attack. Several times the machine massed on my exposed flank or got units behind my lines but once in position, it just seemed to dither around and not go in for the kill. Consequently the Union player is pretty safe from the devastating counter-attacks which were a feature of Lee's defense in the actual battle.

Furthermore, the computer will nearly always pick up its artillery and run if Union soldiers get too close. This is understandable as captured guns are worth a lot of VP's, however, their close range fire can chop an attack to pieces.

In conclusion, I really do like the game, however I am sure that my main reason is that it is the best game available in this field. The data base detail, the uncertain atmosphere and the combat system are all fine achievements, but in the final assessment, *Battle of Antietam* really is a board game on a screen, only making use of the computer to perform a record keeping function. The game can be long, hard work for a player if you have a lot of units to move - the computer really should be used to take much more of the load.

The basic system can be used for further Civil War battles and undoubtedly will be if *Battle of Antietam* is a success in the market. These new games will be well worth buying if the movement system can be developed into a more player friendly format.

CARRIERS AT WAR

TECHNICAL DATA ON SHIP CLASSES

PART THREE

French, German, Italian, Russian, Norwegian, Swedish, Dutch, Spanish, Greek and Turkish Warships in Service (1939-1945)

This installment completes our warship design feature. Some very small navies (such as Portugal, Poland, Romania and all the Latin American navies) are not included. Notwithstanding their absence, the technical data presented in this series of articles will allow you to construct just about every warship which saw action in the Second World War.

For the most part, the entries in this installment follow the same pattern as the previous installments. For some of the minor navies, however, provision has been made to include smaller warships such as torpedo boats and sloops, especially where these vessels formed an important part of a country's naval doctrine.

Ships not completed in time to take part in the war have, for the most part, been excluded from the directory. A few exceptions however, specifically the more interesting capital ships, have slipped through.

Part One appeared in the January '86 issue. Part Two appeared in the April '86 issue. Both issues can be ordered from our Australian or US office while stocks last.

To make use of the information, locate the required ship from the listing and note the ship class to which it belongs. Now find this ship class from the appropriate table and enter these values either directly into your computer or (recommended) onto a blank design sheet.

Note that the pennant numbers for CV's are included even though there is enough space in the carrier creation routine to enter most names in full.

The ship class tables also include the specialized data needed to create aircraft carriers and submarines. This information appears in the top row, in brackets, beside the number of ships in the class. For carriers, air capacity and spot number are read as (A,S). For subs, depth and speed are read as (D,S).

We can illustrate the procedure with some examples. To design a scenario on the 1940 battles in the Mediterranean you will require, among others, the *Bartolomeo Colleoni*. Consult the Italian ship listings (under light cruisers) and you'll find the pennant number of the *Bartolomeo Colleoni* is CL 5 and the ship class is CL 1928. Locate CL 1928 in the ship class tables and enter the data found there onto a blank design sheet.

The *Komsomolec* is a Russian submarine belonging to ship class SS 1929. The bracketed numbers in the top row of the class data are the submarine's depth value and underwater speed value, namely (3,3) These two values are needed for the other ship creation routine. *Komsomolec's* pennant number is SH304.

The pennant number designation for most ships in this directory is chronological and alphabetical; i.e. within a given class the ships are sorted alphabetically. To use historic pennant numbers would lead to confusion, especially for non-English speaking navies.

In those instances where warships were not given names (for example German U-boats), the historic pennant number or I.D. code has been used.

* * * * *

Throughout the interwar years, the reconstruction of the French Navy was hampered by chronic political crises (and

FRENCH WARSHIPS

CV 1914	CV 1	Bearn
CV 1938	CV 2	Joffre (inc.)
AV 1927	AV 1	Com. Teste
BB 1910	BB 1	Courbet
	BB 2	Jean Bart
	BB 3	Paris
BB 1912	BB 4	Bretagne
	BB 5	Lorraine(a)
	BB 6	Provence
BB 1932	BB 7	Dunkerque
	BB 8	Strasbourg
BB 1935	BB 9	Jean Bart
	BB 10	Richelieu(a)
CA 1924	CA 1	Duquesne
	CA 2	Tourville
CA 1926	CA 3	Colbert
	CA 4	Dupleix
	CA 5	Foch
	CA 6	Suffron(a)
CA 1931	CA 7	Algerie
CL 1922	CL 1	Duguay Trouin
	CL 2	Lamotte-Picquet
	CL 3	Primaguet
CL 1928	CL 4	Jeanne D'Arc
CL 1931A	CL 5	Emile Bertin
CL 1931B	CL 6	Georges Leygues
	CL 7	Gloire
	CL 8	Jean de Vienne
	CL 9	La Galissoniere
	CL 10	Marseillaise
	CL 11	Montcalm
DD 1922	DD 1	Chacal
	DD 2	Jaguar
	DD 3	Leopard
	DD 4	Lynx
	DD 5	Panthere
	DD 6	Tigre
DD 1923	DD 7	Bourrasque
	DD 8	Cyclone
	DD 9	Mistral
	DD 10	Orage
	DD 11	Ouragan
	DD 12	Simoun
	DD 13	Sirocco
	DD 14	Tempete
	DD 15	Tournade
	DD 16	Tramontane
	DD 17	Trombe
	DD 18	Typhon
DD 1925	DD 19	Basque
	DD 20	Bordelais
	DD 21	Boulonnais
	DD 22	Brestois
	DD 23	Forbin
	DD 24	Foudroyant
	DD 25	Fougueux
	DD 26	Frondeur
	DD 27	L'Adroit
	DD 28	L'Alcyon
	DD 29	La Palme
	DD 30	La Railleuse
	DD 31	Le Fortune
	DD 32	Le Mars
DD 1927	DD 33	Bison
	DD 34	Guepard
	DD 35	Lion
	DD 36	Valmy
	DD 37	Verdun
	DD 38	Vauban
DD 1928	DD 39	Aigle
	DD 40	Albatros
	DD 41	Epervier(a)
	DD 42	Gerfaut
	DD 43	Milan(a)
	DD 44	Vautour
DD 1929	DD 45	Cassard
	DD 46	Chevalier Paul
	DD 47	Kersaint
	DD 48	Maille Breze
	DD 49	Tartu
	DD 50	Vauquelin
DD 1931	DD 51	L'Audacieux
	DD 52	L'Indomptable
	DD 53	Le Fantasque
	DD 54	Le Malin
	DD 55	Le Terrible
	DD 56	Le Triomphant
DD 1936	DD 57	Mogador
	DD 58	Volta
DD 1937	DD 59	Casque
	DD 60	Epee
	DD 61	Fleuret
	DD 62	Lansquenet(a)
	DD 63	Le Corsaire(a)
	DD 64	Le Flibustier(a)
	DD 65	Le Hardi
	DD 66	Mameluck(a)
DE 1930	DE 1	Amiral Charner
	DE 2	Bourgainville
	DE 3	D'Entrecasteaux
	DE 4	D'Iberville
	DE 5	Dumont D'Urville
	DE 6	La Grandiere
	DE 7	R. de Genouilly
	DE 8	Sav. de Brazza
TB 1934	TB 1	Baliste
	TB 2	Bombarde
	TB 3	Bouclier
	TB 4	Branlebas
	TB 5	L'Incomprise
	TB 6	L'Iphigenie
	TB 7	La Bayonnaise
	TB 8	La Cordeliere
	TB 9	La Flore
	TB 10	La Melpomene
	TB 11	La Pomone
	TB 12	La Poursuivante
SS 1923	SS 1	Caiman
	SS 2	Dauphin
	SS 3	Espadon
	SS 4	Marsouin
	SS 5	Morse
	SS 6	Narval
	SS 7	Phoque
	SS 8	Requin
	SS 9	Souffleur
SS 1924	SS 10	Ariane
	SS 11	Calypso
	SS 12	Circe
	SS 13	Danae
	SS 14	Doris
	SS 15	Eurydice
	SS 16	Galatee
	SS 17	Nalade
	SS 18	Nymphe
	SS 19	Ondine
	SS 20	Sirene
	SS 21	Thetis
SS 1926	SS 22	Acheron
	SS 23	Achille
	SS 24	Acteon
	SS 25	Agosta
	SS 26	Ajax
	SS 27	Archimede
	SS 28	Argo
	SS 29	Beveziers
	SS 30	Casabianca
	SS 31	Fresnel
	SS 32	Henri Poincare
	SS 33	L'Espoire
	SS 34	Le Centaure
	SS 35	Le Conquerant
	SS 36	Le Glorieux
	SS 37	Le Heros
	SS 38	Le Tonnant
	SS 39	Monge
	SS 40	Ouessant
	SS 41	Pascal
	SS 42	Pasteur
	SS 43	Pegase
	SS 44	Persee
	SS 45	Poncelet
	SS 46	Protee
	SS 47	Redoutable
	SS 48	Sfax
	SS 49	Sidi Ferruch
	SS 50	Vengeur
SS 1927	SS 51	Diamant
	SS 52	Nautilus
	SS 53	Perle
	SS 54	Rubis
	SS 55	Saphir
	SS 56	Turquoise
SS 1928A	SS 57	Surcouf
SS 1928B	SS 58	Amazone
	SS 59	Amphitrite
	SS 60	Antiope
	SS 61	Arethuse
	SS 62	Argonaute
	SS 63	Atalante
	SS 64	Diane
	SS 65	La Psyche
	SS 66	La Sultane
	SS 67	La Sybille
	SS 68	La Vestale
	SS 69	Meduse
	SS 70	Ondine
	SS 71	Oreade
	SS 72	Orion
	SS 73	Orphee
SS 1933	SS 74	Ceres
	SS 75	Iris
	SS 76	Junon
	SS 77	Minerve
	SS 78	Pallas
	SS 79	Venus
SS 1938	SS 80	Aurore
	SS 81	La Creole

GERMAN WARSHIPS

CV 1936A	CV 1	Graf Zeppelin (i.)
CV 1936B	CV 2	Seydlitz (inc.)
BB 1935	BB 1	Gneisenau
	BB 2	Scharnhorst
BB 1936	BB 3	Bismarck
	BB 4	Tirpitz
CA 1929	CA 1	Adm. Graf Spee
	CA 2	Admiral Scheer
	CA 3	Deutschland
CA 1935	CA 4	Admiral Hipper
	CA 5	Blucher
	CA 6	Prinz Eugen
CL 1921	CL 1	Emden
CL 1926	CL 2	Karlsruhe
	CL 3	Koln(a)
	CL 4	Konigsberg
CL 1928	CL 5	Leipzig
CL 1934	CL 6	Nurnberg

DD 1934	DD Z1	Leberecht Maass
	DD Z2	Georg Thiele
	DD Z3	Max Schultz
	DD Z4	Richard Beitzen
	DD Z5	Paul Jacobi
	DD Z6	Theodor Riedel
	DD Z7	Herm. Schoemann
	DD Z8	Bruno Heinemann
	DD Z9	Wolfgang Zenker
	DD Z10	Hans Lody
	DD Z11	Bernd von Arnim
	DD Z12	Erich Giese
	DD Z13	Erich Koellner
	DD Z14	Freidrich Ihn
	DD Z15	Erich Steinbrinck
	DD Z16	Freidrich Eckoldt
	DD Z17	Diether v. Roeder
	DD Z18	Hans Ludemann
	DD Z19	Hermann Kunne
	DD Z20	Karl Galster
	DD Z21	Wil. Heidkamp
	DD Z22	Anton Schmitt
DD 1938	DD Z23 - DD Z30	
DD 1939	DD Z31 - DD Z34	
	DD Z37 - DD Z39	
DD 1940	DD Z35 - DD Z36	
	DD Z43 - DD Z44	
DE 1934	DE F1 - DE F10	
TB 1924	TB 1	Albatros
	TB 2	Falke
	TB 3	Greif
	TB 4	Iltis
	TB 5	Jaguar
	TB 6	Kondor
	TB 7	Leopard
	TB 8	Luchs
	TB 9	Mowe
	TB 10	Seeadler
	TB 11	Tiger
	TB 12	Wolf
TB 1937	TB T1 - TB T21	
TB 1940	TB T22 - TB T36	
SS 1935	U1 - U24	
	U56 - U63	
	U120 - U121	
	U137 - U152	
SS 1936A	U25 - U26	
SS 1936B	U27 - U36	
	U45 - U55	
	U69 - U102	
	U132 - U136	
	U201 - U212	
	U221 - U232	
	U235 - U291	
	U301 - U329	
	U331 - U394	
	U396 - U458	
	U465 - U486	
	U551 - U683	
	U701 - U722	
	U731 - U779	
	U821 - U828	
	U901 - U908	
	U921 - U930	
	U951 - U1031	
	U1051 - U1058	
	U1063 - U1065	
SS 1938	U37 - U44	
	U64 - U68	
	U103 - U111	
	U122 - U131	
	U167 - U176	
	U183 - U194	
	U501 - U550	
	U801 - U806	
	U841 - U846	
	U853 - U859	
	U865 - U870	
	U877 - U881	
	U1221 - U1235	
	U1501 - U1530	
SS 1941	U116 - U119	
	U219 - U220	
	U233 - U234	
SS 1944A	U1405 - U1409	
SS 1944B	U2501 - U2546	
	U2548 - U2551	
	U3001 - U3035	
	U3037 - U3041	
	U3501 - U3530	
SS 1944B	U2321 - U2371	
	U4701 - U4712	

ITALIAN WARSHIPS

CV 1925	CV 1	Aquila
BB 1910	BB 1	Conte di Cavour
	BB 2	Giulio Cesare
BB 1912	BB 3	Andrea Doria
	BB 4	Caio Duilio
BB 1934	BB 5	Littorio
	BB 6	Roma
	BB 7	Vittorio Veneto
CA 1925	CA 1	Trento
	CA 2	Trieste
CA 1929	CA 3	Fiume
	CA 4	Gorizia
	CA 5	Pola
	CA 6	Zara
CA 1930	CA 7	Bolzano
CL 1910	CL 1	Taranto
CL 1913	CL 2	Bari
CL 1928	CL 3	Abercio da Barbiano
	CL 4	Amberto di Giussano
	CL 5	Bartolomeo Colleoni
	CL 6	Giovanni delle Bande Nere
CL 1930	CL 7	Luigi Cadorna
	CL 8	Armando Diaz
CL 1931	CL 9	Raimondo Montecuccoli
	CL 10	Muzio Attendolo
CL 1932	CL 11	Emanuel Filiberto Duca D'Aosta
	CL 12	Eugenio di Savoia
CL 1933	CL 13	Luigi di Savoia Duca D'Abruzzi
	CL 14	Giuseppe Garibaldi
CL 1939	CL 15	Attilio Regolo
	CL 16	Pompeo Magno
	CL 17	Scipione Africano
DD 1914	DD 1	Augusto Riboty(a)
	DD 2	Carlo Mirabello
DD 1921	DD 3	Leone
	DD 4	Pantera
	DD 5	Tigre
DD 1923	DD 6	Francesco Crispi
	DD 7	Quintino Sella
DD 1924	DD 8	Aquilone(a)
	DD 9	Borea(a)
	DD 10	Cesare Battisti
	DD 11	Daniele Manin
	DD 12	Espero(a)
	DD 13	Euro(a)
	DD 14	Francesco Nullo
	DD 15	Nazario Sauro
	DD 16	Nembo(a)
	DD 17	Ostro(a)
	DD 18	Turbine(a)
	DD 19	Zeffiro(a)
DD 1927	DD 20	Alvise da Mosto
	DD 21	Antonio da Noli
	DD 22	Antonio Pigafetta
	DD 23	Antoniotto Usodimare
	DD 24	Emanuele Pessagno
	DD 25	Giovanni di Varazzano
	DD 26	Lanzerotto Malocello
	DD 27	Leone Pancaldo
	DD 28	Luca Tarigo
	DD 29	Nicoloso da Recco
	DD 30	Nicolo Zeno
	DD 31	Ugolini Vivaldi
DD 1929	DD 32	Alfredo Oriani
	DD 33	Baleno
	DD 34	Dardo
	DD 35	Folgore
	DD 36	Freccia
	DD 37	Fulmine
	DD 38	Giosue Carducci
	DD 39	Lampo
	DD 40	Maestrale
	DD 41	Saetta
	DD 42	Scirocco
	DD 43	Strale
	DD 44	Vincenzo Gioberti
	DD 45	Vittorio Alfieri
DD 1937	DD 46	Alpino
	DD 47	Artigliere
	DD 48	Ascari
	DD 49	Aviere
	DD 50	Bersagliere
	DD 51	Bombardiere
	DD 52	Camicia Nera
	DD 53	Carabiniere
	DD 54	Corazziere
	DD 55	Corsaro
	DD 56	Fuciliere
	DD 57	Geniere
	DD 58	Granatiere
	DD 59	Lanciere
	DD 60	Legionario
	DD 61	Mitragliere
	DD 62	Velite
DE 1935	DE 1	Pegaso
	DE 2	Procione
	DE 3	Orione
	DE 4	Orsa
DE 1941	DE 5	Aliseo
	DE 6	Animoso
	DE 7	Ardente
	DE 8	Ardimentoso
	DE 9	Ardito
	DE 10	Ciclone
	DE 11	Fortunale
	DE 12	Ghibli
	DE 13	Groppo
	DE 14	Impavido
	DE 15	Impetuoso
	DE 16	Indomito
	DE 17	Intrepido
	DE 18	Monsone
	DE 19	Tifone
	DE 20	Uragano
TB 1911	TB 1	Insidioso

TB 1913	TB	2	Antonio Mosto
	TB	3	Fratelli Cairoli
	TB	4	Giuseppe Cesare Abba
	TB	5	Giuseppe Dezza
	TB	6	Giuseppe Missori
	TB	7	Ippolito Nievo
	TB	8	Simone Schiaffino
TB 1915	TB	9	Audace
TB 1916	TB	10	Angelo Bassini
	TB	11	Enrico Cosenz
	TB	12	Francesco Stocco
	TB	13	Giacinto Carini
	TB	14	Giacomo Medici
	TB	15	Giovanni Acerbi
	TB	16	Giuseppe La Farina
	TB	17	Giuseppe La Masa
	TB	18	Giuseppe Sirtori
	TB	19	Nicola Fabrizi
	TB	20	Vincenzo Giordano Orsini
TB 1917	TB	21	Confienza
	TB	22	Palestro
	TB	23	San Martino
	TB	24	Solferino
TB 1919	TB	25	Achille Papa
	TB	26	Antonio Cantore
	TB	27	Antonio Chinotto
	TB	28	Antonino Cascino
	TB	29	Carlo Montanari
	TB	30	Marcello Prestinari
TB 1920	TB	31	Calatafimi
	TB	32	Castelfidardo
	TB	33	Curtatone
	TB	34	Monzambano
TB 1933	TB	35	Airone
	TB	36	Alcione
	TB	37	Aldebaran
	TB	38	Altair
	TB	39	Andromeda
	TB	40	Antares
	TB	41	Aretusa
	TB	42	Ariel
	TB	43	Astore
	TB	44	Canope
	TB	45	Calipso
	TB	46	Calliope
	TB	47	Cassiopea
	TB	48	Castore
	TB	49	Centauro
	TB	50	Cigno
	TB	51	Circe
	TB	52	Climene
	TB	53	Clio
	TB	54	Libra
	TB	55	Lince
	TB	56	Lira
	TB	57	Lupo
	TB	58	Pallade
	TB	59	Partenope
	TB	60	Perseo
	TB	61	Pleiadi
	TB	62	Polluce
	TB	63	Sagittario
	TB	64	Sirio
	TB	65	Spica
	TB	66	Vega
SS 1925A	SS	1	Antonio Sciesa
	SS	2	Balilla
	SS	3	Domenico Millelire
	SS	4	Enrico Toti
SS 1925B	SS	5	Ciro Menotti
	SS	6	Delfino
	SS	7	Des Geneys
	SS	8	Fratelli Bandiera
	SS	9	Giovanni Bausan
	SS	10	Giovanni da Procida
	SS	11	Goffredo Mameli
	SS	12	Luciano Manara
	SS	13	Luigi Settembrini
	SS	14	Marcantonio Colonna
	SS	15	Narvalo
	SS	16	Pier Capponi
	SS	17	Ruggiero Settimo
	SS	18	Santorre Santarosa
	SS	19	Squalo
	SS	20	Tito Speri
	SS	21	Tricheco
	SS	22	Vettor Pisani
SS 1926	SS	23	Ettore Fieramosca
SS 1929	SS	24	Acciaio
	SS	25	Adua
	SS	26	Alabastro
	SS	27	Alagi
	SS	28	Ambra
	SS	29	Ametista
	SS	30	Anfitrite
	SS	31	Aradam
	SS	32	Argento
	SS	33	Argo
	SS	34	Argonauta
	SS	35	Ascianghi
	SS	36	Asteria
	SS	37	Axum
	SS	38	Avorio
	SS	39	Beilul
	SS	40	Berillo
	SS	41	Bronzo
	SS	42	Cobalto
	SS	43	Corallo
	SS	44	Dagabur
	SS	45	Dessie
	SS	46	Diamonte
	SS	47	Diaspro
	SS	48	Durbo
	SS	49	Fisalia
	SS	50	Galatea
	SS	51	Gemma
	SS	52	Giada
	SS	53	Gondar
	SS	54	Granto
	SS	55	Iride
	SS	56	Jalae
	SS	57	Jantina
	SS	58	Lafole
	SS	59	Macalle
	SS	60	Malachite
	SS	61	Medusa
	SS	62	Naiade
	SS	63	Neghelli
	SS	64	Nereide
	SS	65	Nichelio
	SS	66	Ondina
	SS	67	Onice
	SS	68	Perla
	SS	69	Platino
	SS	70	Porfido
	SS	71	Rubbino
	SS	72	Salpa
	SS	73	Scire
	SS	74	Serpente
	SS	75	Sirena
	SS	76	Smeraldo
	SS	77	Tembien
	SS	78	Topazio
	SS	79	Turchese
	SS	80	Uarsciek
	SS	81	Uebi Scebeli
	SS	82	Velella
	SS	83	Volframio
	SS	84	Zaffiro
SS 1931A	SS	85	Archimede
	SS	86	Evangelista Torricelli
	SS	87	Galileo Ferraris
	SS	88	Galileo Galilei
	SS	89	Glauco
	SS	90	Otaria
SS 1931B	SS	91	Pietro Micca
SS 1932	SS	92	Enrico Tazzoli
	SS	93	Giuseppe Finzi
	SS	94	Pietro Calvi
SS 1936A	SS	95	Atropo
	SS	96	Foca
	SS	97	Zoea
SS 1936B	SS	98	Alpino Bagnolini
	SS	99	Archimede
	SS	100	Brin
	SS	101	Console Generale Liuzzi
	SS	102	Capitano Tarantini
	SS	103	Galvani
	SS	104	Guglielmotti
	SS	105	Reginaldo Giuliani
	SS	106	Torricelli
SS 1937	SS	107	Alessandro Malaspina
	SS	108	Barbarigo
	SS	109	Comandante Cappellini
	SS	110	Comandante Faa di Bruno
	SS	111	Dandolo
	SS	112	Emo
	SS	113	Guglielmo Marconi
	SS	114	Leonardo da Vinci
	SS	115	Luigi Torelli
	SS	116	Maggiore Barraca
	SS	117	Marcello
	SS	118	Michele Bianchi
	SS	119	Mocenigo
	SS	120	Morosini
	SS	121	Nani
	SS	122	Provana
	SS	123	Veniero
SS 1939	SS	124	Ammiraglio Cagni
	SS	125	Ammiraglio Caracciolo
	SS	126	Ammiraglio Millo
	SS	127	Ammiraglio Saint-Bon
SS 1941	SS	128	Flutto
	SS	129	Gorgo
	SS	130	Grongo
	SS	131	Marea
	SS	132	Murena
	SS	133	Nautilo
	SS	134	Sparide
	SS	135	Tritone
	SS	136	Vortice

RUSSIAN WARSHIPS

BB 1909	BB 1*	Marat
	BB 2*	Parizskaya Kommuna
CL 1903	CL 1	Pamiat Merkuriya
CL 1913A	CL 2	Chervona Ukraina
	CL 3	Profintern
CL 1913B	CL 4	Krasnyi Kavkaz
CL 1935	CL 5	Kirov
	CL 6	Voroshilov
CL 1936	CL 7	Maxim Gorkiy
	CL 8	Molotov
	CL 9	Kaganovich
	CL 10	Kalinin
CL 1938	CL 11	Chapayev
	CL 12	Chkalov
	CL 13	Zhelezniakov
	CL 14	Frunze
	CL 15	Kuibyshev
DD 1915	DD 1	Bystryi
	DD 2	Desna
	DD 3	Garibaldi
	DD 4	Iziaslav
	DD 5	Kapitan Belli
	DD 6	Kapitan Kern
	DD 7	Lenin
	DD 8	Novik
	DD 9	Priamyslav
	DD 10	Stalin
	DD 11	Volodarskiy
	DD 12	Zabiyaka
	DD 13	Zinoviev
DD 1932A	DD 14	Baku
	DD 15	Kharkov
	DD 16	Leningrad
	DD 17	Minsk
	DD 18	Moskva
	DD 19	Tbilisi
DD 1932B	DD 20	Bditelnyi
	DD 21	Besposhchadnyi
	DD 22	Bezuprechnyi
	DD 23	Bodryi
	DD 24	Boikiy
	DD 25	Bystryi
	DD 26	Gnevnyi
	DD 27	Gordyi
	DD 28	Gremyashchiy
	DD 29	Gromkiy
	DD 30	Groznyi
	DD 31	Grozyashchiy
	DD 32	Prytkiy
	DD 33	Rastropnyi
	DD 34	Raziashchiy
	DD 35	Razumnyi
	DD 36	Razyaryonnyi
	DD 37	Redkiy
	DD 38	Rekordnyi
	DD 39	Reshitelnyi
	DD 40	Retivyi
	DD 41	Revnostnyi
	DD 42	Ryaniy
	DD 43	Rezkiy
	DD 44	Rezvyi
	DD 45	Serdityi
	DD 46	Silnyi
	DD 47	Skoryi
	DD 48	Slavnyi
	DD 49	Smelyi
	DD 50	Smetlivyi
	DD 51	Smyshlonnyi
	DD 52	Sokrushitelnyi
	DD 53	Soobrazitelnyi
	DD 54	Sovershennyi
	DD 55	Spokoinyi
	DD 56	Sposobnyi
	DD 57	Statnyi
	DD 58	Steregushchiy
	DD 59	Stoikiy
	DD 60	Storozhevoi
	DD 61	Strashnyi
	DD 62	Stremitelnyi
	DD 63	Strogiy
	DD 64	Stroinyi
	DD 65	Surovyi
	DD 66	Svirepyi
	DD 67	Svobodnyi
DD 1934	DD 68	Opytnyi
DD 1937	DD 69	Tashkent
DD 1938	DD 70	Ognevoi
	DD 71	Vnushitelnyi
DD 1939	DD 72	Kiev
	DD 73	Yerevan
ML 1932	ML 1	Marti
SS 1916	AG 23	Trockiy
	AG 24	Lunakharskiy
	AG 25	(-)
	AG 26	Kamenev
SS 1926	D 1	Dekabrist
	D 2	Narodovolec
	D 3	Krasnogvardeyec
	D 4	Revolucyoner
	D 5	Spartakovec
	D 6	Yakobinec
SS 1929	SH101	Losos
	SH102	Leshch
	SH103	Karp
	SH104 - SH110	
	SH111	Karas
	SH112	(-)
	SH113	Strelad
	SH114 - SH116	
	SH117	Makrel
	SH118	Kefal
	SH119	Bieluga
	SH120	(-)
	SH121	Zubatka
	SH122	Sayda
	SH123	Ugor
	SH124 - SH141	
	SH201	Sazan
	SH202	Seld
	SH203	Kambala
	SH204	(-)
	SH205	Nerpa
	SH206 - SH216	
	SH301	Shchuka
	SH302	Okun
	SH303	Yorsh
	SH304	Komsomolec
	SH305	Lin
	SH306	Piksha
	SH307	Treska
	SH308	Syomga
	SH309	Delfin
	SH310	Bielukha
	SH311	Kumzha
	SH317 - SH320	
	SH322 - SH324	
	SH401 - SH412	
SS 1930	L 1	Leninec
	L 2	Stalinec
	L 3	Frunzovec
	L 4	Garibaldyec
	L 5	Charist
	L 6	Karbonariy
	L 7	Voroshilovec
	L 8	Dzherzhinec
	L 9	Kirovec
	L 10 - L 12	
SS 1934	L 13 - L 25	
SS 1935	S 1 - S 22	
	S 31 - S 35	
	S 51 - S 57	
	S101 - S104	
SS 1937	K 1 - K 3	
	K 21 - K 23	
	K 51 - K 56	

MINOR NAVIES

NORWAY

CB 1900	CB 1	Eidsvold
	CB 2	Harald Haarfagre
	CB 3	Norge
	CB 4	Tordenskjold
DD 1908	DD 1	Draug
	DD 2	Garm
	DD 3	Troll
TB 1934	TB 1	Aeger
	TB 2	Gyller
	TB 3	Sleipner
SS 1922	B 1 - B 6	

SWEDEN

CB 1912	CB 1	Drottning Victoria
	CB 2	Gustaf V
	CB 3	Sverige
AC 1905	AC 1	Fylgia
CL 1929	CL 1	Gotland
CL 1943	CL 2	Gota Lejon
	CL 3	Tre Kronor
DD 1907	DD 1	Hugin
	DD 2	Munin
	DD 3	Ragnar
	DD 4	Sigurd
	DD 5	Vidar
	DD 6	Wachtmeister(a)
	DD 7	Wrangel(a)
DD 1924	DD 8	Ehrenskjold
	DD 9	Nordenskjold
DD 1925	DD 10	Psilander
	DD 11	Puke
DD 1929	DD 12	Klas Horn
	DD 13	Klas Uggla
DD 1932	DD 14	Remus
	DD 15	Romulus
DD 1934	DD 16	Gavle
	DD 17	Goteborg
	DD 18	Karlskrona
	DD 19	Malmo
	DD 20	Norrkoping
	DD 21	Stockholm
DD 1940	DD 22	Magne
	DD 23	Mjolner
	DD 24	Mode
	DD 25	Munin
DD 1942	DD 26	Halsingborg
	DD 27	Kalmar
	DD 28	Sundsvall
	DD 29	Visby
SS 1921	SS 1	Bavern
	SS 2	Draken
	SS 3	Gripen
	SS 4	Illern
	SS 5	Ulven
	SS 6	Uttern
SS 1933	SS 7	Delfinen

	SS 8	Nordkaparen
	SS 9	Springaren
SS 1935	SS 10	Dykaren
	SS 11	Sjobjornen
	SS 12	Sjoborren
	SS 13	Sjohasten
	SS 14	Sjohunden
	SS 15	Sjolejonet
TB 1915	SS 16	Sjoormen
	SS 17	Svardfisken
	SS 18	Tumlaren
SS 1940	U 1 -	U 9

HOLLAND

CL 1916	CL 1	Java
	CL 2	Sumatra
CL 1930	CL 3	De Ruyter
CL 1935	CL 4	Jacob van Heemskerck
	CL 5	Tromp
DD 1925	DD 1	Evertsen
	DD 2	Kortenaer
	DD 3	Piet Hein
	DD 4	Van Ghent
DD 1927	DD 5	Banckert
	DD 6	Van Galen
	DD 7	Van Nes
	DD 8	Witte de With
DE 1939	DE 1	Van Kinsbergan
PG 1925	PG 1	Flores
	PG 2	Johan Maurits
	PG 3	Soemba
SS 1915	O 8	
SS 1916	KVII	
SS 1917	KVIII -	KX
SS 1922	KXI -	KXIII
	O 9 -	O 11
SS 1928	O 12 -	O 15
SS 1930	KXIV -	KXVIII
	O 16	
	O 19(a)	
	O 20(a)	
SS 1937	O 21 -	O 24

SPAIN

CA 1928	CA 1	Baleares
	CA 2	Canarias
CL 1915	CL 1	Reina Victoria Eugenia
CL 1917	CL 2	Blas de Lezo
	CL 3	Mendez Nunez
CL 1921	CL 4	Almirante Cervera
	CL 5	Miguel de Cervantes
	CL 6	Principe Alfonso
DD 1920	DD 1	Alsedo
	DD 2	Juan Lazaga
	DD 3	Velasco
DD 1925	DD 4	Alcala Galiano
	DD 5	Almirante Antequera
	DD 6	Almirante Juan Ferrandiz
	DD 7	Almirante Miranda
	DD 8	Almirante Valdes
	DD 9	Ciscar
	DD 10	Churruca
	DD 11	Escano
	DD 12	Gravina
	DD 13	Jorge Juan
	DD 14	Jose Luis Diez
	DD 15	Lepanto
	DD 16	Sanchez Barcaiztegui
	DD 17	Ulloa
DE 1934	DE 1	Jupiter
	DE 2	Marte
	DE 3	Neptuno
	DE 4	Vulcano
DE 1938	DE 5	Eolo
	DE 6	Triton
SS 1927	C 1 -	C 6

GREECE

AC 1907	AC 1	Giorgios Averoff
CL 1910	CL 1	Helle
DD 1930	DD 1	Condouriotis
	DD 2	Psara
	DD 3	Spetsai
	DD 4	Ydra
SS 1925	SS 1	Glavkos(a)
	SS 2	Katsonis
	SS 3	Nereus(a)
	SS 4	Papamicolis
	SS 5	Proteus
	SS 6	Triton

TURKEY

BC 1911	BC 1	Yavuz
CL 1901	CL 1	Hamidieh
	CL 2	Medjidieh
DD 1930	DD 1	Adatepe
	DD 2	Kocatepe
DD 1931	DD 3	Tinaztepe
	DD 4	Zafer
DD 1939	DD 5	Demirhisar
	DD 6	Gayret
	DD 7	Muavenet
	DD 8	Sultanhisar
SS 1926	SS 1	Birindci Inonu
	SS 2	Ikindci Inonu
SS 1930	SS 3	Atilay
	SS 4	Dumlupynar
	SS 5	Gur
	SS 6	Sakarya
	SS 7	Saldiray
	SS 8	Yildiray
SS 1939	SS 9	Burac Reis
	SS 10	Murat Reis
	SS 11	Oruc Reis
	SS 12	Ulac Ali Reis

the frequent changes of government this brought about), the world depression of the early 1930s and the restraints imposed by the several Naval Treaties.

It was not until 1937 that adequate funds were allotted for warship construction. Though there was insufficient time to complete the pre-war estimates, for the most part, the French Navy was satisfactorily equipped on the outbreak of war. She was certainly in no worse a state than her immediate Mediterranean adversary, Italy.

The most pressing problems of the French Navy were the lack of a modern anti-aircraft weapon and the virtual absence of asdic in any of their anti-submarine vessels.

The armistice of June 1940 found most of the French fleet dispersed in French colonial possessions or British ports. Those in British ports were seized while pre-emptive strikes were carried out against Mers-el-Kebir and Dakar. These actions soured Anglo-French relations (never very good at the best of times) for the rest of the war.

In the aftermath of the North African landings and the German occupation of Vichy France, many French warships were sent for refit to the USA; most notably the *Richelieu*. Other French vessels, operated by the small Free French Navy, saw action (occasionally) from British ports.

* * * * *

On 21st June, 1919, Vice-Admiral Ludwig von Reuter upheld the honour of his service and scuttled every German warship interned at Scapa Flow. The immediate consequence of this action was the confiscation of most of Germany's remaining naval vessels.

The post WWI German Navy began with nothing other than a few aged pre-dreadnoughts, some antiquated light cruisers, a handful of coastal vessels and a restricting naval personnel limit of 15,000 officers and men.

During the twenties and early thirties, various ruses camouflaged the secret development of submarine and naval aviation design and doctrine. The *Reichsmarine*, under the able direction of Admiral Raeder, gradually rebuilt its technical expertise, if not its strength.

With the rise to power of Hitler, all spheres of German militarism, openly or otherwise, ignored the limitations of the Versailles Agreement. For the Navy, this meant a huge expansion in materiel and manpower.

Hitler's preferred naval policy envisiged the use of a powerful main battle fleet, though how this force was to be sustained on the high seas was never addressed. To this end, Phase II (1936-1943) of the naval building plan included the construction of 4 aircraft carriers and 8 battleships.

This policy clashed with the naval staff's prediction that a vigorous anti-commerce campaign, both by surface raiders and submarines, offered the best chance in a war with France and/or England.

Fortunately for the Allies, it was not until mid-1940 that the decision to accord top priority to U-boat construction was made.

Subsequent to the severe losses sustained in April 1940 in the invasion of Norway, German capital ships took little part in the war.

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FRENCH SHIP CLASSES

NUMBER IN CLASS	#	1(40,3)	1(40,5)	1(26,1)	3	3	2	2	2	4	1	3
SHIP CLASS NAME	[8]	CV 1914	CV 1938	AV 1927	BB 1910	BB 1912	BB 1932	BB 1935	CA 1924	CA 1926	CA 1931	CL 1922
ALLIED	Y/N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SEAPLANE	Y/N	N	N	Y	N	N(Ya)	Y	Y(Na)	Y	Y	Y	Y
SHIP TYPE	0-4	0	0	0	1	1	1	1	1	1	1	2
MAXIMUM SPEED	0-45	22	33	21	20	19	30	32(33a)	34	31	31	33
DISPLACEMENT	0-31	11	9	5	11	12	14	20(22a)	5	5	6	4
HEAVY AA	0-31	3	8	12	4	6	16	15	4	4	12	2
LIGHT AA	0-31	4	5	4	1	3	6	4(20a)	4	4	4	1
ARMOUR	0-15	3	4	2	10	11	10	14	1	2	5	1
PRIMARY GUNS	0-15	0	0	0	12	10	8	8	8	8	8	0
SECONDARY GUNS	0-15	8	4	0	11	14	8	9	0	0	0	8
TORPEDO TUBES	0-15	4	0	0	4	0	0	0	6	0(12a)	6	12
VULNERABILITY	0-7	1	3	2	3	4	5	5(6a)	3	4	5	3
ANTI-SUBMARINE	0-7	0	0	0	0	0	0	0	0	0	0	0
TORPEDO LOADS	0-3	1	0	0	3	0	0	0	2	0(3a)	3	2

NUMBER IN CLASS	#	1	1	6	6	12	14	6	6	6	6	2
SHIP CLASS NAME	[8]	CL 1928	CL 1931A	CL 1931B	DD 1922	DD 1923	DD 1925	DD 1927	DD 1928	DD 1929	DD 1931	DD 1936
ALLIED	Y/N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SEAPLANE	Y/N	Y	Y	Y	N	N	N	N	N	N	N	N
SHIP TYPE	0-4	2	2	2	2	2	2	2	2	2	2	2
MAXIMUM SPEED	0-45	25	34	31	35	33	33	36	36	36	37	39
DISPLACEMENT	0-31	4	3	4	1	1	1	1	1	1	1	2
HEAVY AA	0-31	2	4	8	1	0	0	0	0	0	0	0
LIGHT AA	0-31	3	3	4	1	2	2	2	2	2	2	2
ARMOUR	0-15	1	1	4	0	0	0	0	0	0	0	0
PRIMARY GUNS	0-15	0	0	0	0	0	0	0	0	0	0	0
SECONDARY GUNS	0-15	8	9	9	2	2	2	5	5	5	5	8
TORPEDO TUBES	0-15	2	6	4	6	6	6	6	6(7a)	7	9	10
VULNERABILITY	0-7	3	4	4	3	2	3	4	4	4	4	5
ANTI-SUBMARINE	0-7	0	0	0	3	1	2	3	4	1	3	1
TORPEDO LOADS	0-3	2	2	2	1	1	1	1	1	1	1	1

NUMBER IN CLASS	#	8	8	12	9(3,4)	12(3,3)	29(3,5)	6(3,4)	1(3,5)	16(3,4)	6(3,4)	2(5,4)
SHIP CLASS NAME	[8]	DD 1937	DE 1930	TB 1934	SS 1923	SS 1924	SS 1926	SS 1927	SS 1928A	SS 1928B	SS 1933	SS 1938
ALLIED	Y/N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SEAPLANE	Y/N	N	Y	N	N	N	N	N	N	N	N	N
SHIP TYPE	0-4	2	2	2	3	3	3	3	3	3	3	3
MAXIMUM SPEED	0-45	37(35a)	16	35	15	14	17	12	19	14	15	15
DISPLACEMENT	0-31	1	1	0	1	0	1	0	2	0	0	1
HEAVY AA	0-31	0	0	0	0	0	0	0	0	0	0	0
LIGHT AA	0-31	2	2	1	1	1	1	1	2	0	1	1
ARMOUR	0-15	0	0	0	0	0	0	0	0	0	0	0
PRIMARY GUNS	0-15	0	0	0	0	0	0	0	2	0	0	0
SECONDARY GUNS	0-15	3	3	1	1	1	1	1	0	1	1	1
TORPEDO TUBES	0-15	7	0	2	10	7	11	5	12	8	9	9
VULNERABILITY	0-7	5	2	2	1	1	3	3	4	4	4	5
ANTI-SUBMARINE	0-7	5	4	4	0	0	0	0	0	0	0	0
TORPEDO LOADS	0-3	1	0	2	2	2	1	1	2	1	1	1

GERMAN SHIP CLASSES

NUMBER IN CLASS	#	1(42,5)	1(18,2)	2	2	3	3	1	3	1	1	22
SHIP CLASS NAME	[8]	CV 1936A	CV 1936B	BB 1935	BB 1936	CA 1929	CA 1935	CL 1921	CL 1926	CL 1928	CL 1934	DD 1934
ALLIED	Y/N	N	N	N	N	N	N	N	N	N	N	N
SEAPLANE	Y/N	N	N	Y	Y	Y	Y	N	Y	N	Y	N
SHIP TYPE	0-4	0	0	1	1	1	1	2	2	2	2	2
MAXIMUM SPEED	0-45	35	32	32	29	28	33	29	32	32	32	38
DISPLACEMENT	0-31	13	8	16	21	7	8	3	3	3	3	1
HEAVY AA	0-31	12	10	14	16	6	12	3	2(4a)	2	8	0
LIGHT AA	0-31	10	5	5	6	3	4	1	3	2	3	2
ARMOUR	0-15	4	1	14	13	3	3	2	3	2	6	0
PRIMARY GUNS	0-15	0	0	9	8	6	8	0	0	0	0	0
SECONDARY GUNS	0-15	15	0	12	12	8	0	8	9	9	9	3
TORPEDO TUBES	0-15	0	0	0	0	8	12	4	12	12	12	8
VULNERABILITY	0-7	3	4	5	6	4	5	3	4	4	5	4
ANTI-SUBMARINE	0-7	0	0	0	0	0	0	0	0	0	0	1
TORPEDO LOADS	0-3	0	0	0	0	3	3	3	2	2	2	1

GERMAN SHIP CLASSES (CONT.)

NUMBER IN CLASS	#	8	7	4	10	12	21	15	50(4,2)	2(4,3)	707(5,3)	210(5,2)
SHIP CLASS NAME	[8]	DD 1938	DD 1939	DD 1940	DE 1934	TB 1924	TB 1937	TB 1940	SS 1935	SS 1936A	SS 1936B	SS 1938
ALLIED	Y/N	N	N	N	N	N	N	N	N	N	N	N
SEAPLANE	Y/N	N	N	N	N	N	N	N	N	N	N	N
SHIP TYPE	0-4	2	2	2	2	2	2	2	3	3	3	3
MAXIMUM SPEED	0-45	39	39	38	28	34	36	33	13	18	17	18
DISPLACEMENT	0-31	1	1	1	0	1	0	1	0	0	0	0
HEAVY AA	0-31	0	0	0	2	3	1	4	0	1	0	0
LIGHT AA	0-31	2	3	4	2	1	2	3	1	1	1	2
ARMOUR	0-15	0	0	0	0	0	0	0	0	0	0	0
PRIMARY GUNS	0-15	0	0	0	0	0	0	0	0	0	0	0
SECONDARY GUNS	0-15	4	5	3	0	1	1	2	0	0	0	1
TORPEDO TUBES	0-15	8	8	8	0	6	6	6	3	6	5	6
VULNERABILITY	0-7	4	5	5	2	3	4	5	4	4	6	5
ANTI-SUBMARINE	0-7	2	2	3	3	1	1	2	0	0	0	0
TORPEDO LOADS	0-3	1	1	1	0	1	1	1	2	2	2	2

NUMBER IN CLASS	#	8(5,2)	5(5,7)	121(5,7)	63(4,7)
SHIP CLASS NAME	[8]	SS 1941	SS 1944A	SS 1944B	SS 1944C
ALLIED	Y/N	N	N	N	N
SEAPLANE	Y/N	N	N	N	N
SHIP TYPE	0-4	3	3	3	3
MAXIMUM SPEED	0-45	16	9	16	15
DISPLACEMENT	0-31	1	0	1	0
HEAVY AA	0-31	1	0	0	0
LIGHT AA	0-31	1	0	1	0
ARMOUR	0-15	0	0	0	0
PRIMARY GUNS	0-15	0	0	0	0
SECONDARY GUNS	0-15	1	0	0	0
TORPEDO TUBES	0-15	2	2	6	2
VULNERABILITY	0-7	5	4	6	5
ANTI-SUBMARINE	0-7	0	0	0	0
TORPEDO LOADS	0-3	2	2	3	1

A NOTE ON GERMAN SUBMARINE CLASSES

German U-Boat classes were better known by their type number. The following list should be of help in identifying the right class.

TYPE I	- SS 1936A	TYPE X	- SS 1941
TYPE II	- SS 1935	TYPE XVII	- SS 1944A
TYPE VII	- SS 1936B	TYPE XXI	- SS 1944B
TYPE IX	- SS 1938	TYPE XXIII	- SS 1944C

ITALIAN SHIP CLASSES

NUMBER IN CLASS	#	1(51,4)	2	2	3	2	4	1	1	1	4	2
SHIP CLASS NAME	[8]	CV 1925	BB 1910	BB 1912	BB 1934	CA 1925	CA 1929	CA 1930	CL 1910	CL 1913	CL 1928	CL 1930
ALLIED	Y/N	N	N	N	N	N	N	N	N	N	N	N
SEAPLANE	Y/N	N	Y	Y	N	N	N	N	N	N	N	Y
SHIP TYPE	0-4	0	1	1	1	1	1	1	2	2	2	2
MAXIMUM SPEED	0-45	30	27	26	30	36	32	36	28	25	37	37
DISPLACEMENT	0-31	11	11	12	18	5	6	5	2	2	3	3
HEAVY AA	0-31	6	8	10	12	16	16	16	2	2	6	6
LIGHT AA	0-31	17	5	6	7	2	3	2	1	1	3	2
ARMOUR	0-15	1	10	10	13	3	6	3	2	1	1	1
PRIMARY GUNS	0-15	0	10	10	9	8	8	8	0	0	0	0
SECONDARY GUNS	0-15	4	6	6	12	0	0	0	7	8	8	8
TORPEDO TUBES	0-15	0	3	3	0	8	0	8	4	0	4	4
VULNERABILITY	0-7	1	4	4	5	3	4	4	2	3	2	4
ANTI-SUBMARINE	0-7	0	0	0	0	0	0	0	0	0	0	0
TORPEDO LOADS	0-3	0	3	3	0	2	0	2	1	0	1	1

NUMBER IN CLASS	#	2	2	2	3	2	3	2	12	12	16	17
SHIP CLASS NAME	[8]	CL 1931	CL 1932	CL 1933	CL 1939	DD 1914	DD 1921	DD 1923	DD 1924	DD 1927	DD 1929	DD 1937
ALLIED	Y/N	N	N	N	N	N	N	N	N	N	N	N
SEAPLANE	Y/N	Y	Y	Y	N	N	N	N	N	N	N	N
SHIP TYPE	0-4	2	2	2	2	2	2	2	2	2	2	2
MAXIMUM SPEED	0-45	37	37	34	40	35	34	35	35(36a)	38	38	38
DISPLACEMENT	0-31	4	4	5	2	1	1	1	1	1	1	1
HEAVY AA	0-31	6	6	8	8	1	0	0	0	0	0	5
LIGHT AA	0-31	3	4	3	3	1	3	2	2	2	2	2
ARMOUR	0-15	2	3	4	0	0	0	0	0	0	0	0
PRIMARY GUNS	0-15	0	0	0	0	0	0	0	0	0	0	0
SECONDARY GUNS	0-15	8	8	10	4	4(5a)	4	2	2	3	2	3
TORPEDO TUBES	0-15	4	6	6	8	4	4	4	6	6	6	6
VULNERABILITY	0-7	4	4	5	4	3	4	3	3	3	2	5
ANTI-SUBMARINE	0-7	0	0	0	2	1	2	2	2	2	3	3
TORPEDO LOADS	0-3	1	1	1	1	1	1	1	1	1	1	1

ITALIAN SHIP CLASSES (CONT.)

NUMBER IN CLASS	#	4	16	1	7	1	11	4	6	4	32	4(6,2)
SHIP CLASS NAME	[8]	DE 1935	DE 1941	TB 1911	TB 1913	TB 1915	TB 1916	TB 1917	TB 1919	TB 1920	TB 1933	SS 1925A
ALLIED	Y/N	N	N	N	N	N	N	N	N	N	N	N
SEAPLANE	Y/N	N	N	N	N	N	N	N	N	N	N	N
SHIP TYPE	0-4	2	2	2	2	2	2	2	2	2	2	3
MAXIMUM SPEED	0-45	28	26	36	33	34	34	32	33	33	34	16
DISPLACEMENT	0-31	1	1	0	0	0	0	0	0	1	0	1
HEAVY AA	0-31	2	2	0	0	0	0	1	0	1	2	0
LIGHT AA	0-31	1	1	2	2	2	2	1	2	1	2	1
ARMOUR	0-15	0	0	0	0	0	0	0	0	0	0	0
PRIMARY GUNS	0-15	0	0	0	0	0	0	0	0	0	0	0
SECONDARY GUNS	0-15	1	1	1	3	4	3	2	2	2	0	1
TORPEDO TUBES	0-15	6	4	2	4	4	4	4	4	6	4	6
VULNERABILITY	0-7	3	4	3	3	4	4	3	4	4	5	5
ANTI-SUBMARINE	0-7	5	4	2	2	1	2	1	2	2	4	0
TORPEDO LOADS	0-3	1	1	1	1	1	1	1	1	1	1	3

NUMBER IN CLASS	#	18(6,3)	1(4,3)	61(4,3)	6(4,3)	1(5,4)	3(5,3)	3(5,3)	9(6,3)	17(5,3)	4(5,4)	9(5,3)
SHIP CLASS NAME	[8]	SS 1925B	SS 1926	SS 1929	SS 1931A	SS 1931B	SS 1932	SS 1936A	SS 1936B	SS 1937	SS 1939	SS 1941
ALLIED	Y/N	N	N	N	N	N	N	N	N	N	N	N
SEAPLANE	Y/N	N	N	N	N	N	N	N	N	N	N	N
SHIP TYPE	0-4	3	3	3	3	3	3	3	3	3	3	3
MAXIMUM SPEED	0-45	15	15	14	17	16	17	16	18	18	17	16
DISPLACEMENT	0-31	0	1	0	1	1	1	1	1	1	1	0
HEAVY AA	0-31	0	0	0	0	0	0	0	0	2	2	1
LIGHT AA	0-31	1	1	1	1	1	1	1	1	1	1	1
ARMOUR	0-15	0	0	0	0	0	0	0	0	0	0	0
PRIMARY GUNS	0-15	0	0	0	0	0	0	0	0	0	0	0
SECONDARY GUNS	0-15	1	1	1	1	2	1	1	1	1	1	1
TORPEDO TUBES	0-15	6	8	6	8	6	8	6	8	8	14	6
VULNERABILITY	0-7	5	2	4	4	4	4	4	5	5	5	4
ANTI-SUBMARINE	0-7	0	0	0	0	0	0	0	0	0	0	0
TORPEDO LOADS	0-3	2	2	2	2	2	2	1	2	2	3	2

RUSSIAN SHIP CLASSES

NUMBER IN CLASS	#	2	1	2	1	2	4	5	13	6	48	1
SHIP CLASS NAME	[8]	BB 1909	CL 1903	CL 1913A	CL 1913B	CL 1935	CL 1936	CL 1938	DD 1915	DD 1932A	DD 1932B	DD 1934
ALLIED	Y/N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SEAPLANE	Y/N	N	N	N	N	N	N	N	N	N	N	N
SHIP TYPE	0-4	1	2	2	2	2	2	2	2	2	2	2
MAXIMUM SPEED	0-45	22	19	22	29	36	35	34	33	36	36	42
DISPLACEMENT	0-31	10	3	3	4	4	4	6	1	1	1	1
HEAVY AA	0-31	3	1	2	6	6	6	8	0	1	1	0
LIGHT AA	0-31	2	1	1	4	3	4	6	1	1	2	2
ARMOUR	0-15	9	1	3	3	2	2	3	0	0	0	0
PRIMARY GUNS	0-15	12	0	0	0	0	0	0	0	0	0	0
SECONDARY GUNS	0-15	8	5	8	4	9	9	6	2	3	2	2
TORPEDO TUBES	0-15	4	0	6	12	6	6	6	9	8	6	8
VULNERABILITY	0-7	2	1	1	2	3	4	5	3	2	2	3
ANTI-SUBMARINE	0-7	0	0	0	0	0	0	0	1	1	1	1
TORPEDO LOADS	0-3	2	0	2	1	2	2	2	1	1	1	1

NUMBER IN CLASS	#	1	2	2	1	4(3,3)	6(4,4)	87(3,3)	12(4,4)	13(4,5)	37(4,4)	12(3,5)
SHIP CLASS NAME	[8]	DD 1937	DD 1938	DD 1939	ML 1932	SS 1916	SS 1926	SS 1929	SS 1930	SS 1934	SS 1935	SS 1937
ALLIED	Y/N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SEAPLANE	Y/N	N	N	N	N	N	N	N	N	N	N	N
SHIP TYPE	0-4	2	2	2	2	3	3	3	3	3	3	3
MAXIMUM SPEED	0-45	39	37	38	14	15	14	13	14	18	19	21
DISPLACEMENT	0-31	1	1	1	2	0	1	0	1	1	0	1
HEAVY AA	0-31	0	1	1	4	0	0	0	0	0	0	0
LIGHT AA	0-31	3	2	2	2	1	1	1	1	1	1	0
ARMOUR	0-15	0	0	0	0	0	0	0	0	0	0	0
PRIMARY GUNS	0-15	0	0	0	0	0	0	0	0	0	0	0
SECONDARY GUNS	0-15	3	2	3	2	0	1	0	1	1	1	0
TORPEDO TUBES	0-15	9	6	10	0	4	8	6	6	8	6	10
VULNERABILITY	0-7	6	4	4	2	2	1	3	2	3	4	5
ANTI-SUBMARINE	0-7	2	2	2	1	0	0	0	0	0	0	0
TORPEDO LOADS	0-3	1	1	1	0	2	2	2	2	2	2	2

MINOR NAVIES (Norway, Sweden, Holland, Spain, Greece [pt])

NUMBER IN CLASS	#	4	3	3	6(2,6)	3	1	1	2	7	2	2
SHIP CLASS NAME	[8]	CB 1900	DD 1908	TB 1934	SS 1922	CB 1912	AC 1905	CL 1929	CL 1943	DD 1907	DD 1924	DD 1925
ALLIED	Y/N	NOR	NOR	NOR	NOR	SWE	SWE	SWE	SWE	SWE	SWE	SWE
SEAPLANE	Y/N	N	N	N	N	N	N	Y	N	N	N	N
SHIP TYPE	0-4	1	2	2	3	1	2	2	2	2	2	2
MAXIMUM SPEED	0-45	17	27	30	14	23	22	28	33	30(34a)	36	35
DISPLACEMENT	0-31	2	0	0	0	3	2	2	4	0	0	1
HEAVY AA	0-31	1	0	0	1	2	0	2	0	0	0	0
LIGHT AA	0-31	1	1	1	0	3	1	2	7	1	1	2
ARMOUR	0-15	6	0	0	0	8	4	1	1	0	0	0
PRIMARY GUNS	0-15	2	0	0	0	4	0	0	0	0	0	0
SECONDARY GUNS	0-15	3	2	2	0	6	8	6	7	1	2	2
TORPEDO TUBES	0-15	2	3	2	4	0	2	6	6	2(4a)	6	4
VULNERABILITY	0-7	0	1	4	4	2	0	3	5	2	3	3
ANTI-SUBMARINE	0-7	0	1	1	0	0	0	0	0	1	2	1
TORPEDO LOADS	0-3	1	2	1	2	0	2	2	2	1	1	1

NUMBER IN CLASS	#	2	2	6	4	4	6(3,3)	3(4,4)	9(4,5)	9(5,3)	2	1
SHIP CLASS NAME	[8]	DD 1929	DD 1932	DD 1934	DD 1940	DD 1942	SS 1921	SS 1933	SS 1935	SS 1940	CL 1916	CL 1930
ALLIED	Y/N	SWE	SWE	SWE	SWE	SWE	SWE	SWE	SWE	SWE	HOL	HOL
SEAPLANE	Y/N	N	N	N	N	N	N	N	N	N	Y	Y
SHIP TYPE	0-4	2	2	2	2	2	3	3	3	3	2	2
MAXIMUM SPEED	0-45	36	34	39	30	39	15	15	16	14	31	32
DISPLACEMENT	0-31	0	0	1	0	1	0	0	0	0	3	3
HEAVY AA	0-31	0	0	0	0	0	0	0	0	0	0	0
LIGHT AA	0-31	1	1	2	2	2	1	1	1	1	3	4
ARMOUR	0-15	0	0	0	0	0	0	0	0	0	3	2
PRIMARY GUNS	0-15	0	0	0	0	0	0	0	0	0	0	0
SECONDARY GUNS	0-15	2	1	2	1	2	1	1	0	0	10	7
TORPEDO TUBES	0-15	6	4	6	3	6	4	4	6	4	0	0
VULNERABILITY	0-7	4	3	4	4	5	2	4	4	3	2	4
ANTI-SUBMARINE	0-7	3	3	4	4	6	0	0	0	0	0	0
TORPEDO LOADS	0-3	1	1	1	1	1	2	2	2	2	0	0

NUMBER IN CLASS	#	2	4	4	1	3	1(2,6)	1(2,3)	3(3,3)	6(2,3)	4(4,3)	8(4,4)
SHIP CLASS NAME	[8]	CL 1935	DD 1925	DD 1927	DE 1939	PG 1925	SS 1915	SS 1916	SS 1917	SS 1922	SS 1928	SS 1930
ALLIED	Y/N	HOL	HOL	HOL	HOL	HOL	HOL	HOL	HOL	HOL	HOL	HOL
SEAPLANE	Y/N	N	N	N	N	Y	N	N	N	N	N	N
SHIP TYPE	0-4	2	2	2	2	2	3	3	3	3	3	3
MAXIMUM SPEED	0-45	34	36	36	26	15	13	15	15	15(12a)	15	18(19a)
DISPLACEMENT	0-31	2	1	1	1	1	0	0	0	0	0	0(1a)
HEAVY AA	0-31	0	1	1	0	1(0a)	0	1	1	1	0	1
LIGHT AA	0-31	3	1	2	1	1(2a)	0	0	1	1	1	1
ARMOUR	0-15	1	0	0	1	1	0	0	0	0	0	0
PRIMARY GUNS	0-15	0	0	0	0	0	0	0	0	0	0	0
SECONDARY GUNS	0-15	6	2	2	2	3	0	2	0	0	0	0
TORPEDO TUBES	0-15	6	6	6	0	0	4	6	4	5	5	8
VULNERABILITY	0-7	5	4	5	4	3	1	2	3	3	4	5
ANTI-SUBMARINE	0-7	0	2	2	3	2	0	0	0	0	0	0
TORPEDO LOADS	0-3	2	1	1	0	0	2	1	2	2	2	2

NUMBER IN CLASS	#	4(5,4)	2	1	2	3	3	14	4	2	6(4,4)	1
SHIP CLASS NAME	[8]	SS 1937	CA 1928	CL 1915	CL 1917	CL 1921	DD 1920	DD 1925	DE 1934	DE 1938	SS 1927	AC 1907
ALLIED	Y/N	HOL	SPA	SPA	SPA	SPA	SPA	SPA	SPA	SPA	SPA	GRE
SEAPLANE	Y/N	N	N	N	N	N	N	N	N	N	N	N
SHIP TYPE	0-4	3	1	2	2	2	2	2	2	2	3	1
MAXIMUM SPEED	0-45	20	33	26	29	33	34	36	19	20	16	23
DISPLACEMENT	0-31	1	5	2	2	4	1	1	1	1	1	4
HEAVY AA	0-31	1	8	2	2	4	0	1	1	0	1	3
LIGHT AA	0-31	1	3	1	1	1	1	1	1	2	0	2
ARMOUR	0-15	0	2	3	3	3	0	0	0	0	0	8
PRIMARY GUNS	0-15	0	8	0	0	0	0	0	0	0	0	4
SECONDARY GUNS	0-15	0	4	9	6	8	2	3	2	2	0	8
TORPEDO TUBES	0-15	8	12	4	12	12	4	6	0	0	6	0
VULNERABILITY	0-7	5	4	0	1	3	2	4	3	4	3	1
ANTI-SUBMARINE	0-7	0	0	0	0	0	1	3	4	4	0	0
TORPEDO LOADS	0-3	2	2	2	1	2	1	1	0	0	2	0

MINOR NAVIES (Greece, Turkey)

NUMBER IN CLASS	#	1	4	6(4,5)	1	2	2	2	4	2(2,4)	6(4,4)	4(5,5)
SHIP CLASS NAME	[8]	CL 1910	DD 1930	SS 1925	BC 1911	CL 1901	DD 1930	DD 1931	DD 1939	SS 1926	SS 1930	SS 1939
ALLIED	Y/N	GRE	GRE	GRE	TUR	TUR	TUR	TUR	TUR	TUR	TUR	TUR
SEAPLANE	Y/N	N	N	N	N	N	N	N	N	N	N	N
SHIP TYPE	0-4	2	2	3	1	2	2	2	2	3	3	3
MAXIMUM SPEED	0-45	18	38	14	27	22	36	36	35	14	17	14
DISPLACEMENT	0-31	1	1	0	9	2	1	1	1	0	0	0
HEAVY AA	0-31	1	1	0	5	2	0	0	0	0	0	0
LIGHT AA	0-31	1	1	1	2	1	2	2	1	1	1	1
ARMOUR	0-15	1	0	0	11	2	0	0	0	0	0	0
PRIMARY GUNS	0-15	0	0	0	10	0	0	0	0	0	0	0
SECONDARY GUNS	0-15	3	2	1	10	2	2	2	2	1	1	1
TORPEDO TUBES	0-15	2	6	6(8a)	2	2	6	6	8	6	6	5
VULNERABILITY	0-7	0	3	3	3	1	3	4	5	2	3	4
ANTI-SUBMARINE	0-7	0	1	0	0	0	1	2	3	0	0	0
TORPEDO LOADS	0-3	1	1	2	3	2	1	1	1	1	2	3

AUXILLIARY VESSELS (All Nationalities)

NUMBER IN CLASS	#	Sml Trans	Med Trans	Lge Trans	Oilers	Oilers	Oilers	Oilers	Atk Trans	Tenders	Veh Land.	Tk Land.
SHIP CLASS NAME	[8]	TR SMALL	TR MED	TR LARGE	AO FLEET	AO FLEET	AO FLEET	AO OTHER	APA ATK	AD MISC	LSV MISC	LST MISC
ALLIED	Y/N	ANY	ANY	ANY	US	COM	JAP	ANY	US	ANY	US	US
SEAPLANE	Y/N	N	N	N	N	N	N	N	N	N	N	N
SHIP TYPE	0-4	4	4	4	4	4	4	4	4	4	4	4
MAXIMUM SPEED	0-45	9-15	8-15	8-15	14-22	14-18	11-18	8-14	16-20	14-18	20	12
DISPLACEMENT	0-31	0-1	2-4	5-10	1-4	1-3	1-3	0-3	2-5	1-6	2	1
HEAVY AA	0-31	0-1	0-2	0-5	2-8	0-2	0-2	0	4-8	0-8	2	0
LIGHT AA	0-31	0-2	0-4	0-8	1-8	1-3	1-4	0-1	2-6	0-4	2	2
ARMOUR	0-15	0	0	0	0	0	0	0	0	0	0	0
PRIMARY GUNS	0-15	0	0	0	0	0	0	0	0	0	0	0
SECONDARY GUNS	0-15	0	0-2	0-2	1-4	0-2	0-1	0	2-4	0-6	1	0
TORPEDO TUBES	0-15	0	0	0	0	0	0	0	0	0	0	0
VULNERABILITY	0-7	0-3	0-3	0-3	0-2	1-3	0-1	0-2	3-4	1-4	3	3
ANTI-SUBMARINE	0-7	0	0	0	0	0	0	0	0	0	0	0
TORPEDO LOADS	0-3	0	0	0	0	0	0	0	0	0	0	0

The dismemberment of the Austro-Hungarian Empire in the aftermath of the First World War left Italy without a serious rival in the Mediterranean. This, added to the political unrest and economic instability of the post war years, led to a virtual halt in new naval construction until the mid 20s.

By 1928, Mussolini had consolidated his power in Italy with the elimination of every political rival. His ambition included a substantial expansion in Italy's colonnial empire. This required a concomitant increase in naval strength.

Long standing grievances with France over the borders of their neighbouring North African possessions led to a limited arms race with that country in the early 30s. A temporary settlement was reached in January 1935 and then Mussolini turned his attention to the conquest of Abyssinia (nowadays Ethiopia).

The philosophy behind Italian warship design in the interwar years was to maximize speed and firepower at the expense of stability and endurance. The impressive speeds reached in trials were rarely attained in practice and as events were to reveal, British warships could usually outrun their Italian counterparts.

The suborning of the Italian Naval High Command to Mussolini's political pressure resulted in irresolute and, for the most part, incompetant direction of the Italian Navy during the Second World War. By mid-1942, the growing Allied air and naval strength, together with a worsening fuel shortage, curtailed operations by the remaining Italian capital ships.

* * * * *

Russian naval construction prior to 1944 amounted to little more than a handful of surface ships and a larger, if poorly designed, number of submarines. Naval operations during the war were mainly in support of land forces, most notably the desperate and determined defense of Leningrad from 1941 through to 1943. Some amphibious operations were mounted in the Black Sea.

In the prewar years, design assistance was sought, and received, from Germany, Italy, France and England. During the war, both ships and materiel were provided, mostly by the United States, and formed the basis for the subsequent blossoming of the Russian Navy.

* * * * *

The minor navies listed herein had varied experiences throughout the war. What most commonly characterized their naval development was a reliance on foreign purchase for most of their warships.

Sweden and Holland are the exceptions. Both of these countries have a long and proud naval tradition and, in general, designed, developed and built their own warships. For example, the Dutch destroyers of the *Piet Hein* class, laid down in 1925, were the most modern vessels of their type when designed.

The Dutch, Greek and Norwegian navies were more or less destroyed within weeks of being at war. A few vessels escaped to Allied ports and operated against the Axis forces for the rest of the war.

QUESTIONS AND ANSWERS

We seem to have run out of room this issue. The questions answered here are from the more recent queries we've received.

If there is anything you'd like to know about our games, write to us.

Q. In *Europe Ablaze*, does damage to industry affect production and hence replacements of aircraft?

A. No. The scenarios don't last long enough to really need to reflect such an influence. In any case, while bombing could make an impact at differing times, the truly limiting factor in air force performance is crew training and competence. It was ultimately an easier job to assemble airframes than to put highly trained crew in them. This is emphasized in *Europe Ablaze*, where crew ability is relatively more important than aircraft superiority.

Q. In *Europe Ablaze*, how do you know if your bombing has damaged a radar station?

A. You don't. It was a real problem for the Germans in the Battle of Britain and after a while they gave up bombing them.

Q. Why don't you publish the details of your combat mechanisms so that players can know the likelihood of success or failure of missions before they send them off?

A. SSG does not wish to produce games that must be played on a calculator. The whole idea of using the computer is to remove the burden of bookeeping from the player. This is also enables us to remove information that an equivalent boardgame would have to present. We see this as a bonus. Players should have to make decisions based on the same sort of information as the commanders that they are emulating. Using the computer also allows the mechanisms to be quite complex and detailed. Since all combats are treated individually, working out the figures for even one mission would be quite a job, as well as a waste of time in terms of getting an advantage in the game. That sort of stuff is best left in the computer, where it belongs.

Q. What is the best way to assign things like the invasion multiple in *Carriers at War* or the thresholds in *Europe Ablaze*?

A. The most efficient way is to let the computer play itself a number of times. The average of such results gives you a reasonable basis for decision making. In *Europe Ablaze* remember to turn off all the combat reports and the sound. This makes the testing process much faster.

Q. There appear to be some anomalies in Scenario III of *Europe Ablaze*. Squadrons 122, 129 and 140 are all listed as unassigned in the database. Also the Me 410A is defined as a plane type but never used. What are the correct dispositions for these?

A. You're right, you know! We never noticed. I can't seem to find my notes for this scenario. I have to get back to you in the next issue!

ORIGINS '86

By the time you read these words, this convention will be either in progress or over. ***Europe Ablaze*** has received a nomination for the Charles Roberts Award in the category of *Best Adventure Game for the Home Computer*, the same award that we won with ***Carriers at War*** last year. This year, however, the competition is a lot stiffer.

It is interesting to note that of the six games nominated, four are either published or distributed by Electonic Arts. Microprose and SSI have one nomination each.

If I were a betting man (and I'd have to be to be in this business), I'd put my money on Sid Meier's *Silent Service*. It is by far the best game Microprose have ever released.

Whatever, we hope we had the chance to talk to you if you came along, especially if you bought our new game!

ON BOARD GAMES

Just as a matter of interest, if any of you are into multi-player board games, take a look at Panther Games' new title *Shanghai Trader*. It's tremendous entertainment. It will be released at Origins (or so Dave O'Connor hopes). As I write this, I have in front of me a set of the cardboard counters from the game. They have been back-printed with the artwork from Panther Games' supplement to *Trial of Strength*. It's not just the military who can cock things up! Mr O'Connor was not pleased.

WORK IN PROGRESS

There isn't any! Not quite. ***Battlefront*** is finished so now we can take up the epic ***Road to Appomattox*** again. The only work done since the last report has been to the supply mechanisms. That system is now more or less in place.

Our last issue estimate of an October or Novemeber release appears still on target. So you can start holding your breath!

Looking ahead to next year, we plan to release 3 (really?) games. The first will be a grand strategic simulation of the Napoleonic Wars (this Editor's very favourite period of history). The other titles will cover the war in Russia (1941-45) and a space extravaganza of truly spectular proportion.

THE
ROAD TO APPOMATTOX
WILL BE OPEN IN NOVEMBER

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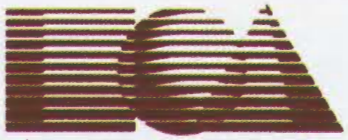

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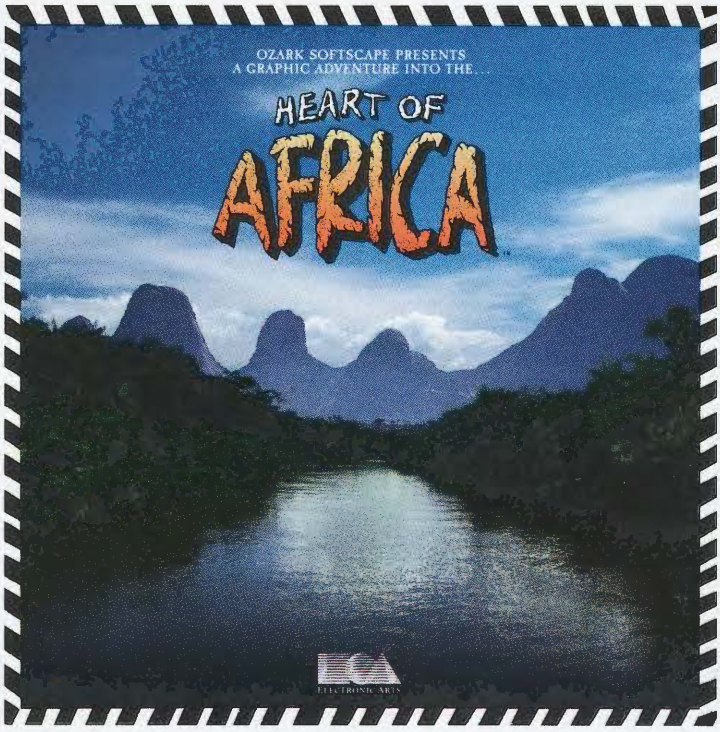

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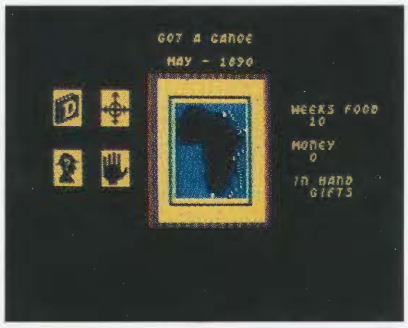

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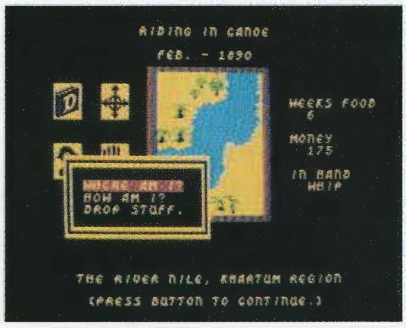

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